TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

June, 1954

Volume 19—Number 6

Copyright 1954 by Equipment Digest Publishing Co.

CHECK AND PASS ALONG

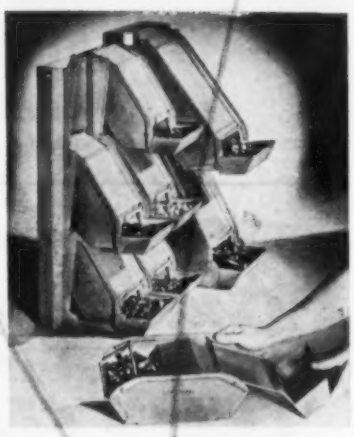
✓	NAME	See No.

PUBLIC LIBRARY JUN 16 1954 DETROIT

Use Inquiry Slips—Pages 8 and 112

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

SMALL PARTS HOPPERS
made from materials handling boxes



Rack and lid combination is used to convert standard NesTier materials handling boxes into small parts hoppers for use in assembly and production operations. Called the Hopper Rack, the conversion unit is available in two sizes for utilizing standard No. 120 and 175 boxes. Multiple wall or bench mounted unit installations are made by bolting sections together vertically, side-by-side or back-to-back. Rack fits under the handles and snaps in place. Tray is designed for three-finger withdrawal of small parts. Made by **Chas. Wm. Doepke Mfg. Co.,** NesTier Div., 8884 Blue Ash Rd., Rossmoyne, O.

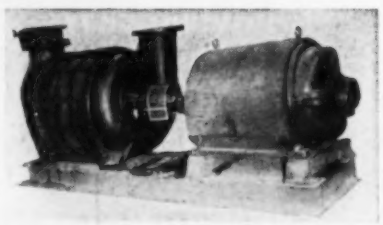
▲ For more details circle **NED-1 F4** on enclosed inquiry slip ▲

ELECTRO-CHEMICAL ETCHER
marks most metals and platings

Designed for production or individual piece marking, E-Z mark etcher handles hardened and ground surfaces, aluminum and stainless steel as well as zinc, copper, steel and their alloys and most platings. It consists of a separate power unit and tray attachment. Power unit is simply controlled by a starting switch and a rheostat switch which controls density of the etch. Complete instructions and an expendable parts list are permanently marked on the top surface of the power unit. Stencils and fluids are available in polyethylene containers. Made by **Crown Industrial Products Co.,** 904 Amsterdam St., Woodstock, Ill.

▲ For more details circle **NED-2 F4** on enclosed inquiry slip ▲

HIGH VOLUME BLOWERS
various ratings are available

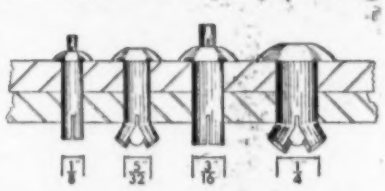


Using a combination of three interchangeable impellers, 386 series high volume centrifugal blowers can be assembled to deliver any air volume between 2000 and 9000 cfm with pressures ranging from 1 to 9 psi or vacuum from 2 to 12-in. mercury. Units can be equipped with impellers imparting a non-overloading characteristic and are self-adapting to any variation in air volume requirements from minimum to maximum capacity. Impeller assemblies are statically and dynamically balanced. Made by **U. S. Hoffman Machinery Corp.,** Air Appliance Div., 101 Fourth Ave., New York 3, N. Y.

▲ For more details circle **NED-3 F4** on enclosed inquiry slip ▲

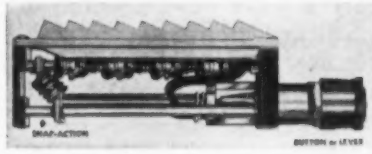
BLIND RIVET
installed from one side by hammer

One man, working without special tools, can install the Southco blind rivet from one side of the job. Rivet is inserted into a hole and the pin protruding from the rivet head is struck with a hammer to expand four prongs on the blind end. This forms a second head and pulls the panels tightly together. No finishing operation is required to install the fastener, made in 1/8, 5/32, 3/16 and 1/4-in. diameters and in grip lengths from 1/32 to 5/8-in. Made by **South Chester Corp.,** Southco Div., 1413 Finance Bldg., Philadelphia 2, Pa.



▲ For more details circle **NED-4 F4** on enclosed inquiry slip ▲

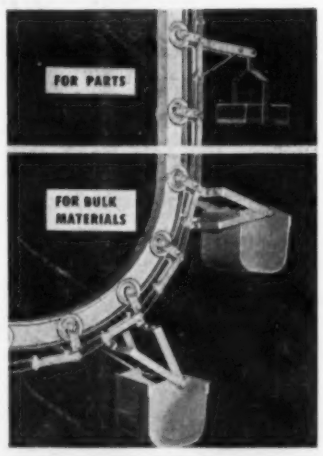
DOUBLE-THROW SWITCH
controls eight primary circuits



Button or lever actuation of this eight-pole double-throw switch enables its over-riding action to switch on or disconnect eight primary circuits. Constant contact pressure of 4 oz per point is maintained throughout the stroke until snap action occurs in either direction. Contacts handle 5 amp, 28 v dc inductive; 10 amp, 115 v dc noninductive; 60 to 400 cycles. Exceeding military specification ANS-63, switch resists shock and vibration and will operate in range from −65 to 160° F. It is available with auxiliary "push to test" single-pole double-throw circuit and dial light. Made by **Guardian Electric Mfg. Co.,** 1621-I W. Walnut St., Chicago 12, Ill.

▲ For more details circle **NED-5 F4** on enclosed inquiry slip ▲

BUCKET TROLLEY CONVEYOR
buckets remain upright in both horizontal and vertical planes



Features of this multiplane bucket trolley conveyor are Stif-Arm hanger which holds bucket trunnions at fixed distance away from trolley chain and single I-beam which prevents buckets from swinging loosely and spilling their contents. Buckets rotate around trunnions to remain upright regardless of the vertical or horizontal turns until they reach tipping rollers at discharge points. Thus, a multiple-plane path can be traveled with single conveyor using single drive unit.

Buckets are self-loading and unloading to handle bulk materials automatically. Wire baskets or pallets can be substituted for buckets to convey many types of parts or finished products. Unit can also be installed in inverted position for "carrousel" applications. Made by **Hapman Conveyors, Inc.,** Dept. MT-205, Kalamazoo, Mich.

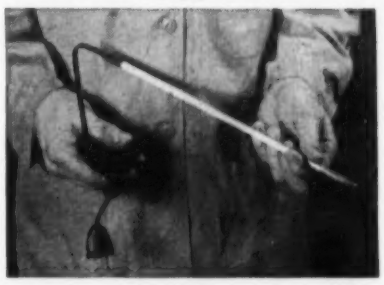
▲ For more details circle **NED-6 F4** on enclosed inquiry slip ▲

PORTABLE AIR DRILL
1½-lb unit works in close quarters

Extremely small size of model 7512 portable air drill, measuring 5½ in. long by 4⅞ in. high, allows its use with minimum effort in assembly lines or close-quarter work. Designed for 3/16-in. heavy duty and ¼-in. light duty drilling, unit weighs less than 1½ lb, yet develops nearly ¼-hp. All moving parts are supported on ball bearings, and planet gears are mounted on self-contained Torrington needle bearings. Other features include built-in automatic oiler, aluminum heat treated pistol grip handle, smooth-acting throttle, finger-tip trigger and five-blade rotary motor. Drill is served by 3/16-in. OD hose. Made by **Aro Equipment Corp.,** Erie St., Bryan, O.

▲ For more details circle **NED-7 F4** on enclosed inquiry slip ▲

QUARTZ ROD IMMERSION HEATER
usable glowing-hot in acid bath



Concentrated heat can be applied exactly where it is needed with the Glo-Quartz immersion heater which has 400-w nickel-chrome heating coil encased in wand of fused quartz less than of ½-in. diameter. Heater can be held in bare hand while 7 in. of its 12-in. length glow red-hot. While thus heated, it can be popped into reaction flask or into acid bath without cracking, breaking or short-circuiting. Operating at 1700° F, heater radiates strongly in the far infra-red, and quartz envelope is a good transmitter. Heater can go right into pipe line of gas or liquid, a miniature high-temperature bath, table-top vaporizer or steam generator or micro furnace. It brings 250 milliliters of water to boil in 3 minutes. Operation is from 115-v line. Made by **Fisher Scientific Co.,** 715 Forbes St., Pittsburgh 19, Pa.

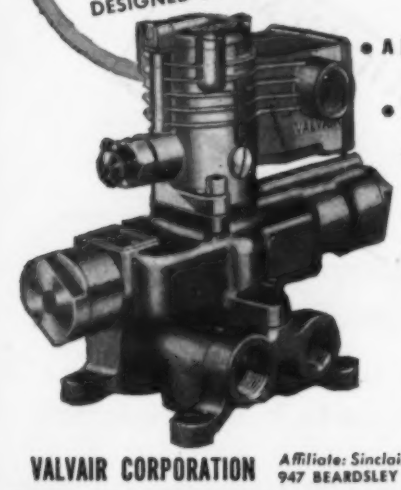
▲ For more details circle **NED-8 F4** on enclosed inquiry slip ▲

MULTIPLE WHEEL MOUNT
for flexible grinding wheels

Use of Grind-O-Flex flexible grinding wheels in multiple units forms a single broad wheel which acts on a larger area than one wheel alone, and also retains the flexing action of the individual wheel. Any number of wheels can be assembled as required in increments of 1 in. for fixed installations. From three to five wheels are recommended for best results when attached to a flexible shaft or portable drill. Wheels weigh about 7 oz each and smoothly finish all contours and irregular surfaces. Made by **Merit Products, Inc.,** 4025 Irving Pl., Culver City, Calif.

▲ For more details circle **NED-9 F4** on enclosed inquiry slip ▲

SPEED KING
SOLENOID PILOT OPERATED CONTROL VALVE
by VALVAIR
DESIGNED AND BUILT TO J. I. C. STANDARDS



- A Hefty Assist to Automation
- Fully Enclosed
- Integral Junction Box

Get 20,000,000-cycle life and more with Speed King, industry's most rugged and compact control valve. 2-way, 3-way, 4-way and 4-way-5-port (2-pressure) models for pneumatic, hydraulic and vacuum service; pipe sizes—¼" through 1".

VALVAIR CORPORATION Affiliate: Sinclair-Collins Valve Company 947 BEARDSLEY AVE., AKRON 11, OHIO

Rely Upon Valvair DIVERSATILITY

ASK FOR BULLETIN "N-6"

▲ For more details circle NED-10 F4 on enclosed inquiry slip ▲

NOW
Spray it Clean
with KELITE SPRAY WHITE
and this money-saving
KELITE SPRAY GUN

This amazing patented* super-cleaner removes . . . grease, oil, wax, gum, dirt, dye, ink, soap, light carbon.

SPRAY WHITE does its work with complete safety . . . free from heat, odor, fumes, solvents, fire-hazard, or danger to skin.

This remarkable chemical compound, when used according to directions, is safe on all metals, plastics, rubber, porcelain, composition, or wood.

Send for list of 200 leading American companies who have bought Kelite Spray White, and Kelite Sprayers (200 in use in one plant). Thousands of companies are saving time and money, and keeping premises and equipment sparkling clean, with this exclusive and patented Kelite development.

THE KELITE SPRAY GUN is rugged—easy to use. Polyethylene container is light, shatter-proof, holds 1 pint liquid. Send for complete description.

*U.S. Patent No. 2,381,124

Spray White MADE BY KELITE®

Service Offices in 98 American Cities and 16 Countries Abroad
PLANTS IN LOS ANGELES • BERKELEY HEIGHTS, N. J.
CHICAGO • DALLAS • MEXICO CITY

Mail Today

KELITE PRODUCTS, INC.
1250 North Main Street, Los Angeles 12, California
___ Mail free Spray White literature and list of prominent users.
___ Request free demonstration of Kelite Spray White.
NAME_____
COMPANY_____
STREET_____
CITY_____

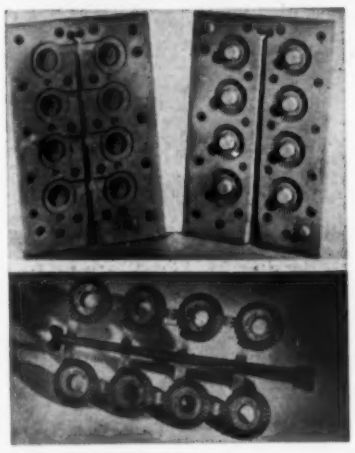
▲ For more details circle NED-11 F4 on enclosed inquiry slip ▲

Nothing New?

Some misinformed dreamer once said, "There's nothing new under the sun." Nothing could be further from the truth. A day never passes that we do not receive news of new or radically improved techniques, materials or equipment that have become available to industry. We then hasten to present the "what", "how" and "where" of the developments to you clearly and concisely so that you can incorporate them into your products or adapt them to your production needs. Every issue of NEW EQUIPMENT DIGEST is jammed with profitable product information. Our principal function is to serve as contact between readers and manufacturers of industrial equipment.

A. N. Gregg
EDITOR

SHELL MOLDING PROCESS
precoating of sand saves resin



Savings in resin content for shell molding are realized with process for precoating sand with Bakelite phenolic resins. With more efficient use of resin, the process makes possible higher green strength, greater shell mold bond strength and smoother casting surfaces. By giving each sand particle a thin layer of resin, fast melt, flow and bond are obtained. Phenolic resin BRQ-12244 is produced in granular form and is non-heat reactive. A catalyst is added in an aqueous solution to trigger the final molding reaction. Coated sand is then dried to pourable state and can be stored for later use. Resulting shell molds have good hot rigidity and resist warping upon ejection from the pattern plate. Resin made by **Bakelite Co.**, Dept. NE, 300 Madison Ave., New York 17, N. Y.

▲ For more details circle NED-12 F4 on enclosed inquiry slip ▲

O-Rings & Back-Up Rings

United States Gasket Co.—Chemiseal synthetic rubber O-rings and Chem-o-green Teflon back-up or nonextrusion rings for both commercial and military requirements are covered in illustrated bulletin OB-1152. In addition to giving data on full line and size range of these products, catalog also contains reference selection tables and useful general engineering information.

▲ For more details circle NED-13 F4 on enclosed inquiry slip ▲

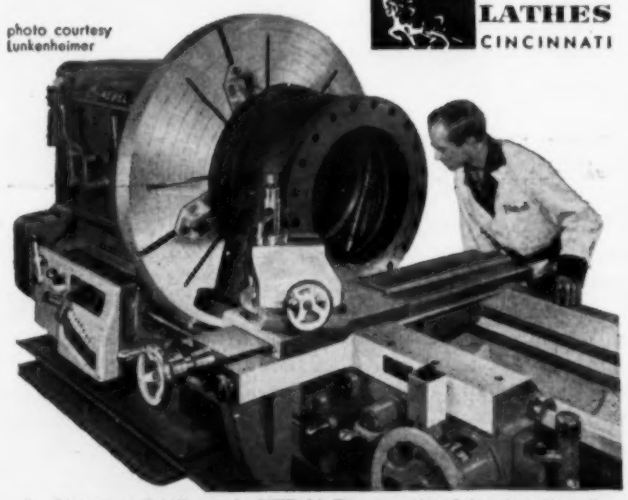
POWER
PRECISION
PERFORMANCE

You get all this plus profitable metal turning from this giant 28"/50" Nebel 'G' series extension bed gap lathe . . . and from all the other Nebel gap and engine lathes. Sizes 16" to 50".

Write the Nebel Machine Tool Co., 3416 Central Pkwy., Cin'ti 25, O., for literature, prices, delivery.

Nebel LATHES CINCINNATI

photo courtesy Lunkenheimer



▲ For more details circle NED-14 F4 on enclosed inquiry slip ▲

ILLUMINATED MAGNIFIER
for inspection and assembly

Operator has both hands free. Complete unit including adjustable stand, with precision wide-field lens designed for use at "normal" working distance from eyes. $13.50. See complete line of industrial magnifiers $1 to $25, stocked by leading industrial suppliers. Bausch & Lomb Optical Co., 51630 Bausch Street, Rochester 2, New York.

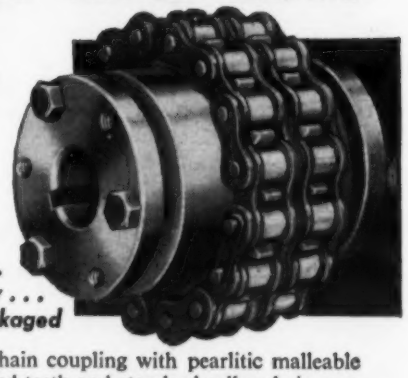
Write today for tell-all handbook and catalog, "INDUSTRIAL MAGNIFIERS, HOW TO CHOOSE AND USE THEM"

BAUSCH & LOMB
Industrial Magnifiers

▲ For more details circle NED-15 F4 on enclosed inquiry slip ▲

Browning's NEW CHAIN COUPLING

STRONG AS THE SHAFT ITSELF!



No reboring . . .
simple assembly . . .
individually packaged

Browning's chain coupling with pearlitic malleable sprockets, hardened teeth and standard roller chain provides maximum capacity and longer life. Employs same split taper compression bushing used in other Browning power transmission products. Strong as the shaft itself! Choice of 9 stock sizes, 38 bores from your Browning distributor. Ask him or write us for Catalog V169.

Browning MANUFACTURING COMPANY MAYSVILLE, KENTUCKY

▲ For more details circle NED-16 F4 on enclosed inquiry slip ▲

Here it is . . .
THE GREATEST MULTI-PURPOSE
AIR HAMMER EVER MADE

THE APPTON
SUPER 7 HAMMER
STARTS and STOPS Automatically!
a GIANT for POWER
a DWARF in SIZE

NO Recoil!
NO Servicing!
Economical to Use!

Patent Nos. 2,265,989—2,333,405—2,320,340.

NEW IMPACT CONTROL FEATURE
(from light tap to heavy blow)

The one hammer that does everything . . . drills! trims! chips! scales! seals! rivets! peens! smooths! welds breaks and cuts metal! . . . yet weighs less than 5 lbs. OVER 40 TOOLS for practically every type job.

Write for prices and literature.
DISTRIBUTOR INQUIRIES INVITED

MANUFACTURED BY BROWN-APPTON CO.
INTERNATIONAL SALES AGENTS
E. V. NIELSEN, INC.
1280 BROAD ST. STAMFORD, CONN.

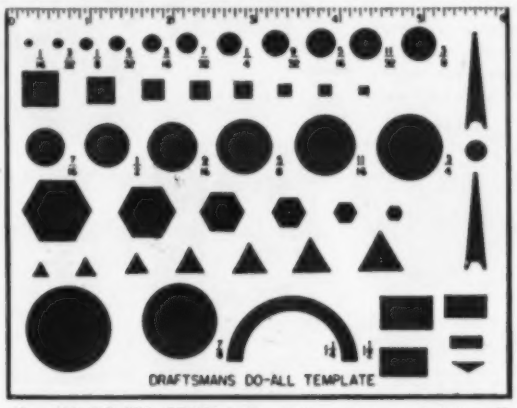
▲ For more details circle NED-17 F4 on enclosed inquiry slip ▲

DO-ALL LETTERING GUIDE

FOR PERFECT PENCIL LETTERING

THREE SIZES of upper case letters and numbers on one guide, 1/8", 3/16", 1/4" with 1/8" lower case letters. Available in VERTICAL or SLANT letters. Size: 1 7/8" x 9 3/4" x .020".

No. 360 (illustrated above) ..... $2.60 each.
No. 260 (without lower case letters) ..... 2.20 each.
GREEK LETTERING GUIDE with ¼" letters ..... 2.50 each.



No. 422 DO-ALL TEMPLATE. A timesaver containing 49 useful cutouts. Size: 4½ x 6" .030" ..... $1.00 each.
JR. DO-ALL TEMPLATE (same as #422 except ½ size) ..... .85 each.

AVAILABLE AT YOUR DRAFTING SUPPLY DEALER

DRAFTSMAN'S DO-ALL TEMPLATES

7319 Colgate P. O. Box 3041 Dallas, Texas

▲ For more details circle NED-18 F4 on enclosed inquiry slip ▲

YOU SAVE $$$ WITH

EMBOSSED LABELS

NO DIE CHARGE

FOR PRODUCT IDENTIFICATION

ANY SIZE LABEL
ANY SIZE LETTERS
ANY METAL — INCLUDING STAINLESS STEEL

Raised-letter nameplates to your specifications. Less expensive than comparable etched labels.

Tack-weld, rivet or screw them to your product. Paint or galvanize over them. Wording will remain sharp and clear. Also etched and lithographed labels.

Send Sample or Sketch for Price Quotation

DEPT. C.

TECH PRODUCTS, INC.
442 Mosel Avenue Staten Island 4, N. Y.

▲ For more details circle NED-19 F4 on enclosed inquiry slip ▲

TEFLON* by ETHYLENE

HIGHEST STANDARD OF QUALITY

Ethylene specializes in producing a wide variety of Teflon forms which are stocked in large quantities to assure quick shipment. Engineering experience is available to help solve your problems.

EXTRUDED OR MOLDED RODS, TUBES, AND SPECIAL SHAPES
• STRESS RELIEVED OR HIGH TENSILE SHEETS AND MOLDINGS
• FILLED PRODUCTS

Send for new illustrated Catalog 54N with stock and price lists.

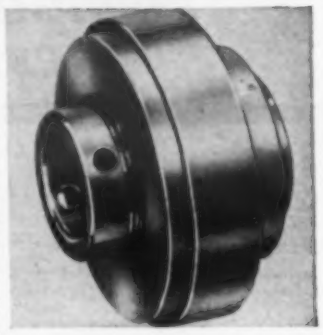
"Pioneers and Specialists in TEFLON products"

ETHYLENE CHEMICAL CORPORATION
245 Broad St. • Summit, New Jersey

*Du Pont Trade-Mark for tetrafluoroethylene resin

▲ For more details circle NED-20 F4 on enclosed inquiry slip ▲

MINIATURE CLUTCHES
for over-running, backstopping



Series of miniature clutches for over-running, backstopping and indexing consists of four models which have all the features of the full complement sprag principle. Clutches have been standardized and feature small size with high torque capacity. Standard bore sizes are ¼, ⅜ and ½-in. Made by **Formsprag Co.**, 23595 Hoover Rd., Van Dyke, Mich.

▲ For more details circle NED-21 F4 on enclosed inquiry slip ▲

MINIATURE BRUSHES
have various bristle materials

Miniature twisted-in-wire brushes are precision made to a diameter of ±0.001-in. and are available with bristles of stainless steel, brass, hog or nylon. Known as Mini-Brushes, they are now available in diameters from 0.060 to 0.124-in., in increments of 0.001-in. Applications include cleaning, scaling, reaming, polishing, deburring and removal of flash rubber from metal bonded parts. Made by **Mill-Rose Co.**, 1983 E. 59th St., Cleveland 3, O.

▲ For more details circle NED-22 F4 on enclosed inquiry slip ▲

POCKET THICKNESS GAGE
measures platings or paint on metal

Pocket-size Elcometer thickness gage measures nonmagnetic protective and decorative coatings such as porcelain enamel, platings, paints, plastic sprays and lacquers on ferrous metal bases. The gage, which is accurate to 5 per cent of each 0.0001-in., weighs approximately 6 oz and can be used on curved as well as flat surfaces. It has locking device so that accurate readings can be taken after measuring an inaccessible area where scale cannot be seen. Contact spheres are hard chrome plated to increase wear resistance. Distributed by **Ferro Corp.**, Dept. TFM, 4150 E. 56th St., Cleveland 5, O.

▲ For more details circle NED-23 F4 on enclosed inquiry slip ▲

...the remote controlled "Lo-Hite" Hydraulic Jack with detached independent pump (note fig. 1 above) is a natural because the ram, only 4½ inches high (note fig. 2) fits in places where a jack handle cannot be used. Connected by 8 feet of strong rubber hose, it can safely and quickly move 30 tons, 2 inches in any direction.

Ask your local distributor for the versatile "Lo-Hite" (No. 30-H-4.5) or write the world's oldest and largest manufacturer of lifting jacks for Bulletin AD32-N and name of nearest distributor, The Duff-Norton Manufacturing Co., P. O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON JACKS

"Giving Industry a Lift Since 1883"

▲ For more details circle NED-24 F4 on enclosed inquiry slip ▲

IT'S SUPERSAFE!

THE *New* IDEAL Voltage Tester

Every feature thousands of electrical men said they wanted including:

New... Handy center mount for prod
Prod storage shield tips
Double strength seamless plastic case—no surface metal

PLUS **"DOUBLE PROTECTION"**
. . . a solenoid, calibrated indicator, AND a neon test lamp, each independent of the other. YOU CAN'T FAIL TO DETECT VOLTAGE! . . . Also many other time-proven IDEAL advantages.

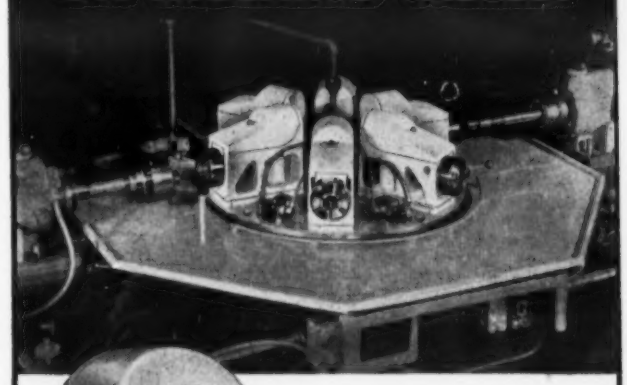
Tests 110 to 550 volts AC—110 to 600 volts DC

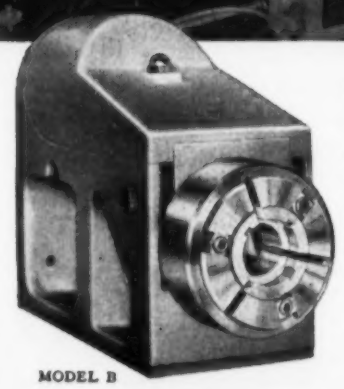
SOLD THROUGH LEADING DISTRIBUTORS. SEE IT NOW

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Please send me full catalog information on new IDEAL Voltage Tester.
Name_____
Company_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-25 F4 on enclosed inquiry slip ▲

Production Tested ON INDEXING TABLES!





MODEL B

- TREMENDOUS HOLDING POWER
- HOLDS ROUGH CASTINGS OF WIDE VARIATIONS
- REGISTERS IN EXACT POSITION EACH TIME
- CAN BE MOUNTED HORIZONTALLY OR VERTICALLY

Introducing the NEW

AIRKOLET Chuck

PATENT PENDING

PRODUCTION TESTED!

The new AIRKOLET Chuck has been tested in production on indexing tables for over a year, on millions of parts of widely differing sizes and shapes . . . registering each part in exact position each time! Due to its design, AIRKOLET proved to be ideally suited for castings where tolerances were required for variations up to 1/16", thus eliminating much unnecessary grinding.

COMPACT . . . RUGGED!

AIRKOLET Chuck mounts horizontally or vertically on drill presses, milling machines, indexing tables where high speed production is desired. Holds parts for turning, drilling, reaming, chamfering and threading. AIRKOLET Chuck is made of close grain gray iron, heavily reinforced, accurately machined. Collet hardened and ground to rigid specifications.

AIRKOLET Model B. Size 1⅞, Capacity:

HEXAGON—Pads ⅜" to 1½" Solid Collet ⅜" to 1⅞"

ROUND—Pads ⅜" to 1⅞" Solid Collet ⅜" to 1⅞"

Supplied with one set soft pads or one solid collet for round or hexagonal parts. Pads, collets for special shapes are available. Air-control valves for hand or foot operation at extra cost.

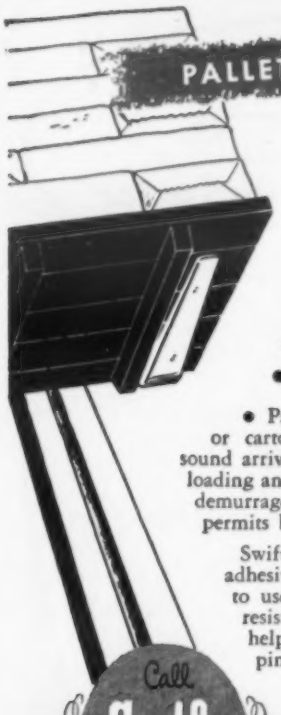
WRITE TODAY for our Bulletin T101 for complete information and specifications.

PITT INDUSTRIES

CARNEGIE, PENNSYLVANIA

T102

▲ For more details circle NED-26 F4 on enclosed inquiry slip ▲



PALLETIZE WITH...

SWIFT'S

PALLETITE

ADHESIVES

- RESISTS HORIZONTAL SHIFTING
- POPS CLEAN ON VERTICAL PULL
- ONE GALLON DOES A CARLOAD!

• Palletizing or unit loading of bags or cartons is good insurance for safe, sound arrival of your merchandise. It speeds loading and unloading, reduces handling and demurrage costs — facilitates inventory and permits better use of warehouse space.

Swift has a versatile team of Palletizing adhesives that are ready, and economical, to use. *All* are non-skid and moisture resistant; one of them probably can help you save *real* money in your shipping department.

Write for information, today!

Call Swift for ADHESIVES

SWIFT & COMPANY
ADHESIVES
PRODUCTS DEPT.
4115 PACKERS AVE.
CHICAGO 9

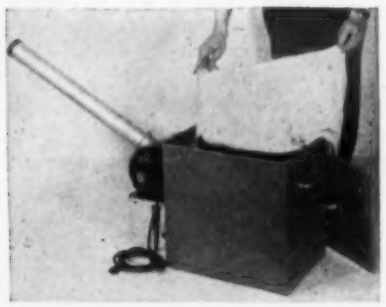
Another of Swift's Products for Industry

For more details circle NED-27 F4 on enclosed inquiry slip

"IMPROVED 1954 MODEL"

Fluorescent Lamp Disposal Unit. Burned out fluorescent lamps present a nuisance and definite hazard. Flur-o-lamp Disposals solve this problem.

THE LAW STATES



fluorescent lamps must be destroyed before they are thrown in the public dump.

The Flur-o-lamp Disposal does the job safely, quickly and economically. Several thousand units now operating successfully.

Three sizes to choose from depending on your requirements.

Send for Catalogue

LADUBY COMPANY INC.

Branford, Connecticut

For more details circle NED-28 F4 on enclosed inquiry slip

FAR-INFRARED HEAT

that's easily controlled, infinitely variable!

CHROMALOX

Electric RADIANT HEATERS

Your Low-Cost Answer to Production Line Heat

Production line heating tunnels and banks can be easily made right on the job with versatile Chromalox Electric Heaters for drying, baking, dehydrating, curing and other applications. Quickly and easily installed units allow you to "dial" the exact temperatures you require every time—all the time! All-metal construction insures against damage from shock, hard knocks, water, etc., and eliminates contamination hazards.

WRITE FOR BULLETIN CS-604

It gives details on Chromalox Electric Radiant Heaters and shows how they reduce costs and increase production in your plant.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on Pg. 75

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-29 F4 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

BPA NBP

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

Penton Building, Cleveland 13, Ohio

A. N. GREGG ..... Editor
H. J. HOLTZ ..... Assoc. Editor
GEO. SOTAK JR. ..... Ass't. Editor
MICHAEL A. L. WEBSTER Ass't. Editor
J. W. CLOSE

F. O. RICE ..... Publisher
WALTER STAAB .. Adv. Service Mgr.
A. BUGOSH ..... Sales Prom. Mgr.
HAZEL DAVIS .. Adv. Production Mgr.
Circulation Mgr.

ADVERTISING REPRESENTATIVES

New York 17 ..... 60 E. 42nd St.—MUrray Hill 2-2581
B. R. BAKER, G. M. BERNARD

Philadelphia .... 7 N. Drexel Ave., Havertown, Pa.—Hilltop 6-3199
V. W. VOLK

Rochester 17, N. Y. ..... 66 Charlton Rd.—Congress 2322
G. F. JOHNSON

Cleveland 13 ..... Penton Building—MAin 1-8260
L. H. WEBER, G. B. GUEST, M. E. OLSON

Chicago 11 ..... 520 N. Michigan Ave.—WHitehall 4-1234
J. H. ROBISON, W. J. LOWITZ, J. M. WELLS, F. J. ZINDLER, R. M. GATELY, JR.

Griffin, Ga. ..... 331 S. Twelfth St.—Griffin 7854
FRED J. ALLEN

Los Angeles 48 ..... 6262 Commodore Sloat Dr.—WEbster 1-6865
F. J. FULLER

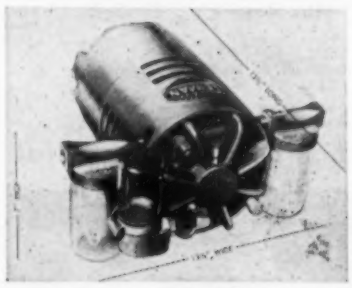
Los Angeles 57 ..... 2330 W. Third St.—DUnkirk 7-4388
ROBERT W. WALKER CO.

San Francisco 4 ..... 57 Post St.—SUtter 1-5568
ROBERT W. WALKER CO.

New Equipment Digest is published monthly by Equipment Digest Publishing Co., Penton Building, Cleveland 13, Ohio; G. O. Hays, President: F. O. Rice, Vice President & Secretary; J. R. Dawley, Vice President; E. L. Shaner, Treasurer; J. P. Lipka, Asst. Secy. & Asst. Treas. Acceptance under section 34.64, P. L. & R., authorized.

Publisher's Notice: We assume no responsibility for the validity of claims in connection with news items appearing in New Equipment Digest. Addresses are given to facilitate further inquiry.

PUMP & MOTOR COMBINATION
compact unit produces 28-in. vacuum



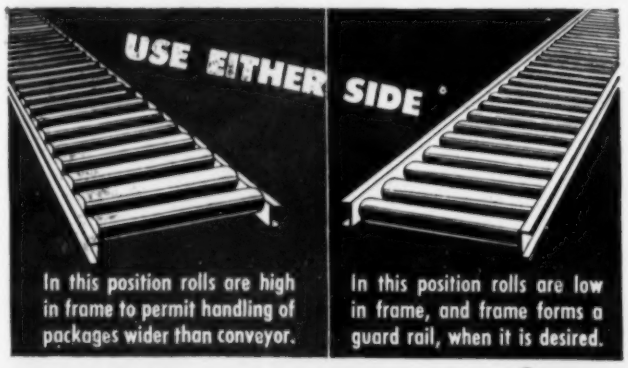
Pump and motor combination measures 13½-in. long and 13¼-in. wide, produces vacuums up to 28 in. and has 3.6 cfm displacement. It can also be used for pressure. It is complete with inlet filter, outlet separator and automatic oiler. Fan-cooled pump is equipped with ball bearings and self-lubricating grease cups. Pump blades are automatically forced against cylinder wall by an adjusting device and are of nonsticking design. Motor is ⅓-hp. Made by **Leiman Bros., Inc.**, 167-A Christie St., Newark 5, N. J.

For more details circle NED-30 F4 on enclosed inquiry slip

Metallic O-Rings

United Aircraft Products, Inc.—20-page illustrated booklet "Self-Energized Metallic O-Rings" deals with vented and standard O-Rings and their applications for static sealing of high and low pressures in wide temperature range. Design and performance data are included.

For more details circle NED-31 F4 on enclosed inquiry slip



ONE of MANY practical features of *Logan*

STOCK ROLLER CONVEYOR

Shown above is one of the features of Logan Stock Roller Conveyor. Other features include (a) immediate shipment (b) available in several sizes (c) both straight and curved sections can be furnished (d) both stationary and portable supports available.

Use the coupon for literature.

Logan CONVEYORS

LOGAN CO., 215 Cabel St.
LOUISVILLE, KY.

LOGAN CO., LOUISVILLE, KY.
☐ Send literature on Stock Conveyors
Mr. _____
Firm _____
Address _____

For more details circle NED-32 F4 on enclosed inquiry slip

750 DIFFERENT CABINET COMBINATIONS

Available for Small Parts Storage, Handling or Display. A Type and Size for Every Need.

We can supply you the perfect cabinet for your particular requirements. 750 different combinations can be CUSTOM - BUILT at production line prices. Free catalog upon request.

AKRO-MILS, INC. Box 989-E, AKRON 9, OHIO

For more details circle NED-33 F4 on enclosed inquiry slip

ULTRA-CHEX GAGE BLOCKS *for Every Need!*

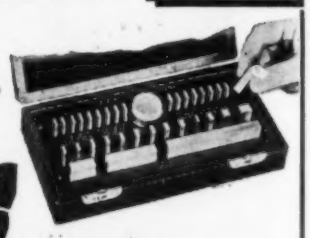
Supplied in one Superior Accuracy

5 MILLIONTHS ± ACCURACY

9 Block Set $22.50
OPTICAL PARALLEL $5.00

Quick Delivery on Small Standard Sets

34 Block Set $125.00
INCLUDING OPTICAL PARALLEL



82 Block Set $275.00 Complete

This Set will supply the needs of any discriminating shop that must work to gage-block precision.

All Sets at "Money Saving Prices" due to Mass Production Methods.

WRITE FOR FULLY ILLUSTRATED CATALOG

Dealers: Here's a real profitable line!

GEORGE SCHERR CO., INC.

COMPLETE LINE OF PRECISION INSTRUMENTS

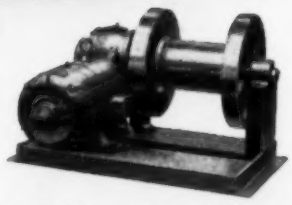
200-ND LAFAYETTE ST. • N.Y. 12, N.Y.

For more details circle NED-34 F4 on enclosed inquiry slip

KING ELECTRIC HOISTS

✓ PUSH BUTTON CONTROL

Push button can be at hoist or remote from hoist. Electric brake on motor. Ideal for merchandise elevators.



✓ MANUALLY CONTROLLED

Clutch and brake operated by hand lever. Spool runs free on ball bearings so empty container or platform can be quickly lowered.

✓ KING CAR PULLERS

Furnished with vertical spool (as shown) or horizontal spool. For pulling and spotting freight cars, barges, kiln cars, etc., and for many pulling and hoisting jobs. Ask for Bulletin 550.

Get a Quote from King

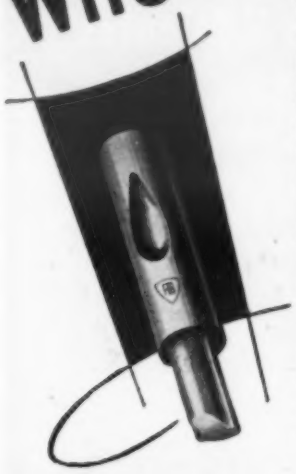
"Let Us Share Your Electric Hoist Problems."

King MANUFACTURING CORP.

3166 W. Chicago Ave. - Chicago 22, Ill.

For more details circle NED-35 F4 on enclosed inquiry slip

WHO USES R-B PUNCHES



Through many years of providing America's leading industries with interchangeable and standardized punches, die buttons and retainers, R-B has built a reputation for increasing production, lowering costs and saving time. R-B case histories of savings and benefits include users of cam actuated, multi-station progressive, forming, blanking, piercing, embossing and combination dies of all sizes and types.

Use R-B Engineering Service for Your Tough Piercing Problems.

Why don't you investigate the cost saving features of R-B equipment?

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 77 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle NED-36 F4 on enclosed inquiry slip ▲

SHEAR SHEET METAL *faster*—

Frederick FRECUT FOOT SHEAR

Model No. 1836

Frecut features a wider holddown, with wider feet, to insure more accurate shearing. Correct leverage means capacity shearing with less operator fatigue. Two gauges . . . front and rear . . . plus an angle gauge, are standard equipment on the Frederick Frecut.

Rugged and durable, the Frecut is priced for factory or job shop operation. Proved in operation by daily use in many plants. Ready for prompt shipment. Write direct for illustrated, descriptive literature and prices.

BUYING DATA
Cap.—18 ga mild steel
Cutting length.....36"
Width of Bed.....14"
Overall height....41"

FREDERICK IRON & STEEL, INC.
MACHINERY DIVISION
FREDERICK *Established 1790* MARYLAND

PRODUCERS OF CENTRIFUGAL PUMPS
WRECKING BALLS • MUNICIPAL INDUSTRIAL CASTINGS

▲ For more details circle NED-37 F4 on enclosed inquiry slip ▲

SPEED UP *Any Nailing Job* CRATING PACKING PALLET MAKING *With the* FOX NAILER

- **Drives nails faster by 150%**
- **Reduces operator fatigue 90%**

Result—Your shipping department can build twice as many crates and packing cases in an eight-hour shift.

The Fox Nailer is easy to operate. It drives almost any common, special nail, drive screw, from 6 to 16 penny. Simply drop nail head-first into sleeve, place point of nail against nailing surface and pull the trigger. Without effort the nail is driven straight into the wood—in less time than it takes to start it with a hammer. Practically no nails are bent using the Fox Nailer.

In less than ten seconds the Fox Nailer attaches to any pneumatic hammer having a .401 recess. Weighs less than one pound and is six inches long. It has only four parts, two of them moving parts which require no lubrication.

Write for details, prices and the name of your nearest distributor.

Distributor inquiries invited

MORTON and COMPANY
1500 S. W. TAYLOR ST., PORTLAND, OREGON

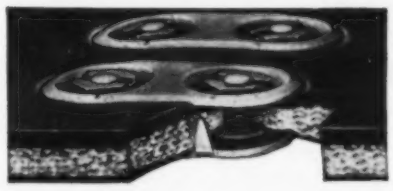
▲ For more details circle NED-38 F4 on enclosed inquiry slip ▲

VINYL COATED GLOVE liquid tight and flexible

Seams are nonexistent on surfaces exposed to abrasion in Staniflex single-seam vinyl plastic coated jersey work glove. Seam-free work surface is 47 sq in. Plastic coating withstands destructive effects of oils, acids, caustics and abrasion and makes the glove liquid tight. Elastic jersey knit lining is comfortable next to the hand and makes hand movement easy. Glove is made in knit wrist, band top and gauntlet styles. Made by **Pioneer Rubber Co.**, 634 Tiffin Rd., Willard, O.

▲ For more details circle NED-39 F4 on enclosed inquiry slip ▲

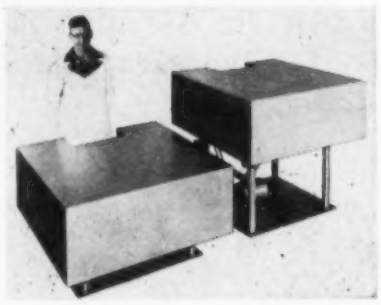
BELT FASTENERS for conveyors fitted with scrapers



Designed for use on conveyor belts equipped with scrapers for removing sticky or wet materials, Scraper Plate belt fasteners have top plates beveled at both ends so that scrapers will ride over them readily. Protrusion of the fastener is also held to a minimum. Available in steel, Monel and Everdur, fasteners are made in one size for joining 5/16 to ½-in. thick belts with not more than 500 ft centers. Made by **Flexible Steel Lacing Co.**, 4607 Lexington St., Chicago 44, Ill.

▲ For more details circle NED-40 F4 on enclosed inquiry slip ▲

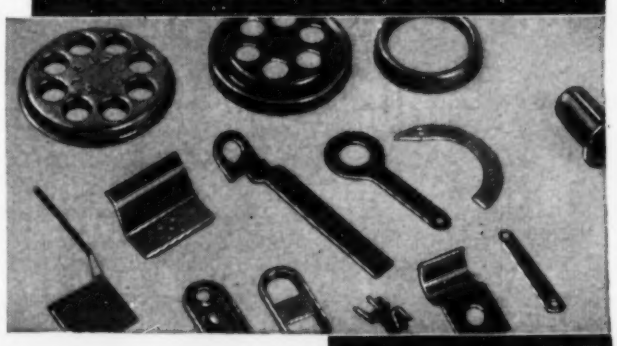
LIFTING TABLES for machine feeding installations



Designed to maintain stock at right height for feeding to machines and for taking finished parts from machines are illustrated Portelvator pack lifters. They are designed for pit installation and have load lift capacities of 2200 lb. Rise is 16 in. from floor level at speed of 27½ ipm. Power source is ¾-hp motor with reversing magnetic starter, and push button controls and gear driven limit switches are fitted. An 8 x 18 in. "operator station" is provided on the long side of the 45 x 48 in. table. Power transmission is mechanical and neither power nor mechanical failure can cause table to fall or settle. Made by **Hamilton Tool Co.**, 901 Hanover St., Hamilton, O.

▲ For more details circle NED-41 F4 on enclosed inquiry slip ▲

WHY MISS DEADLINES?



Experienced producers of stampings, Pix has the skill and the facilities to meet your needs. More . . . you get dependable supply, geared to your production schedules. Count on Pix for precision shapes in steel, nickel, molybdenum, bronzes, and many alloys. Press capacities to 150 tons. Complete catalog available.

SEND SKETCH OR PRINT FOR 48-HOUR QUOTATION

Count on PIX for *Precision Stamping*

PIX MANUFACTURING CO., INC. 5 Oliver Street Newark 5, N. J.

▲ For more details circle NED-42 F4 on enclosed inquiry slip ▲

The "PALLET PACKER"©

Completely eliminates need of a tensioning tool and excessive manual effort. Automatic platen release allows clipped bands to pull taut, keeps loads tightly compressed.

Make every palletized load a pay load with a completely modern, clean line AMBACO press. Fully adjustable push button controls can be set for floor level operation, or raised to conveyor height. All working parts are completely enclosed for maximum safety and efficiency. Handles a variety of materials, with every load uniformly packed and held at proper tension.

Write today for complete information on how the products you process can be handled even more efficiently by an AMBACO "Pallet Packer."

The AMERICAN BALER CO. 654 CENTER ST. BELLEVUE, OHIO

▲ For more details circle NED-43 F4 on enclosed inquiry slip ▲

Simple—Accurate—
WEIR METERS
for Waste Measurement

● Float-and-cable Weir Meters developed by Foxboro offer simple, accurate measurement of liquid flow. Widely used in sewage, chemical processes, and industrial waste disposal.

The Foxboro Weir Meter is extremely simple. Operates through motion of float to measure head through V-notch, rectangular or Cippoletti weirs—or Parshall flumes. Motion is transmitted by cable to accurate recording or integrating mechanisms. Direct-reading, uniform flow scale—copper or plastic-covered floats.

Write for detailed information. **The Foxboro Company, 666 Neponset Ave., Foxboro, Mass., U. S. A.** Also Montreal, Canada. Branches in principal cities.

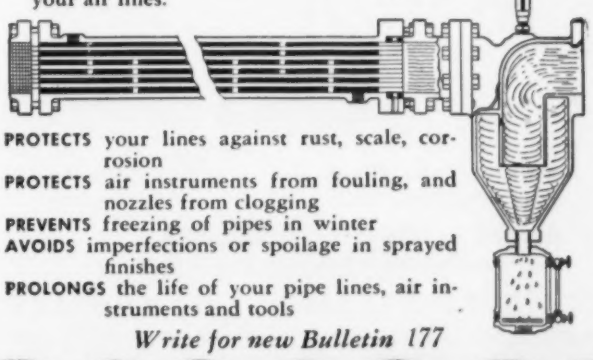
FOXBORO Reg. U. S. Pat. Off. WEIR METERS

▲ For more details circle NED-44 F4 on enclosed inquiry slip ▲

You Can be Sure of Clean Dry Air for your Compressed Air Tools with ADAMS Aftercooler and Cyclone Separator

3500 Gallons
1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



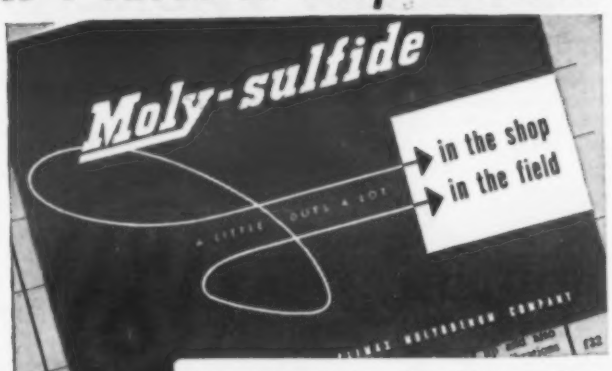
PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 177

R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle NED-45 F4 on enclosed inquiry slip ▲

154 ideas on ways to use...



154 varied applications of molybdenum sulfide in the shop and in the field are described in a new booklet now available. This solid-film lubricant has demonstrated unique anti-friction properties under conditions of extreme pressure, high velocity, elevated temperature, or chemical attack.

The 40-page booklet contains the records of solved lubrication problems—some might solve your own. Write now on your business letterhead for this booklet.

Moly-sulfide
A LITTLE DOES A LOT

The lubricant for extreme conditions

MS-6A

Climax Molybdenum Company
500 Fifth Avenue, New York City 36, N.Y.

▲ For more details circle **NED-46 F4** on enclosed inquiry slip ▲

NEW

SIMPLICITY and FEATURES

BORROUGHS
*UNITIZED flexi
STEEL SHELVING

***every unit is a unit within itself!**

Here's a revolutionary idea in steel shelving. It's by far the most flexible shelving on the market. Shelves can be adjusted independently in a unit without disturbing shelves in adjacent units—no tricky tools or gadgets needed—see illustrations 1-2-3.

send for Catalogue

BORROUGHS MANUFACTURING COMPANY
A SUBSIDIARY OF AMERICAN METAL PRODUCTS COMPANY OF DETROIT
8002 NORTH BURDICK amp KALAMAZOO, MICHIGAN

▲ For more details circle **NED-47 F4** on enclosed inquiry slip ▲

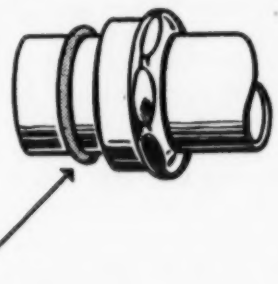
FIRE EXTINGUISHER
vaporizing liquid pressure type

All classes of incipient fires, including those occurring in electrical apparatus and flammable liquids, are handled by this single cylinder pressure type vaporizing liquid fire extinguisher. It is made in 1 and 1½-qt sizes and features an on-and-off thumb lever mechanism which controls discharge. A locking device prevents accidental discharge. Air pressure gage permits visual inspection and a service air line valve facilitates recharging. Made of brass, extinguisher is furnished with either a standard wall or clamping type vehicle bracket. Liquid used in UL-approved unit is carbon tetrachloride or chlorobromomethane. Made by **Pyrene Mfg. Co.,** 551 Belmont Ave., Newark 8, N. J.

▲ For more details circle **NED-48 F4** on enclosed inquiry slip ▲

SLIP JOINT WASHER
fits 1¼ to 2 in. plumbing connections

Slip joint washer expands to fit 1¼, 1⅜, 1½ and 2 in. plumbing slip joint connections. Called Fits-All, it is of round cross-section so that when expanded over tubing, it can be easily rolled into place. A tight seal is given with normal nut pressures and ring will not buckle when nut is tightened. Made by **J. A. Sexauer Mfg. Co.,** Dept. 39, 2503-05 Third Ave., New York 51, N. Y.



▲ For more details circle **NED-49 F4** on enclosed inquiry slip ▲

MAGNETIC SEPARATOR
for hydraulic fluid systems

Very fine steel particles that wear off moving parts are removed from hydraulic fluid systems by the model PS-2 permanent magnet separator. Designed for aircraft hydraulic circuits, it can be installed anywhere working pressures do not exceed 3000 psi. Fluid enters from either end and is filtered through a stack of soft steel grids that are magnetized by Alnico permanent magnets. Separator is 5⅜ in. long and 2 7/16 in. diameter. Maximum capacity is 10 gpm. Made by **S. G. Frantz Co.,** P. O. 1138, Trenton 6, N. J.

▲ For more details circle **NED-50 F4** on enclosed inquiry slip ▲

Determine Surface Moisture in Less Than 2 Minutes

with the OLIVO Moisture Meter

Now you can measure the amount of surface moisture in powdered, granulated or fibrous materials quickly and accurately with the Olivo Moisture Meter.

Completely portable, the Olivo Moisture Meter can be used by all operating personnel. No special skill or experience is needed.

For complete information . . . write for Booklet MM-14.

Complete kit, including carrying case and all necessary auxiliary equipment . . . only **$195** F.O.B. Pittsburgh

Heyl+Patterson, Inc. SINCE 1887
55 FORT PITT BLVD. PITTSBURGH 22, PA.
Heavy Bulk Materials Handling Equipment
All The Way from Design to Erection

▲ For more details circle **NED-52 F4** on enclosed inquiry slip ▲

BE *Safe* COUPLE-UP WITH
PREMIER
TRUCK-TRAILER coupling equipment

THERE'S A SOLID PINTLE OR SWIVEL PINTLE TYPE IN A VARIETY OF SIZES FOR EVERY COUPLING NEED

Premier hitches are engineered for one-hand operation—*no struggling to engage or disengage the drawbar*—and ruggedly built for long life and *safety*—the double locking mechanism insures maximum safety. *Premier hitches meet I.C.C. standards.*

Premier Hitches are easily serviced—standard replacement parts are readily available.

FOR A SAFER, SMOOTHER COUPLING CONNECTION... USE PREMIER DRAWBARS

Pioneer manufacturers of coupling equipment — used by major fleets in the West for more than 25 years.

Write today for PREMIER HITCH & DRAWBAR CATALOGS.

Illus.: No. 290—Swivel Pintle type.
No. 480—Extra Heavy Duty Solid Pintle type.

PREMIER MANUFACTURING COMPANY
943 N. Russell St. • Portland 12, Oregon

▲ For more details circle **NED-53 F4** on enclosed inquiry slip ▲

Do You Get All This When You Buy Hose and Couplings?

- EASE OF ASSEMBLY?
- SIMPLIFIED ORDERING AND INVENTORY?
- POSITIVE LEAKPROOF CONNECTIONS?
- FIELD ENGINEERING SERVICE?

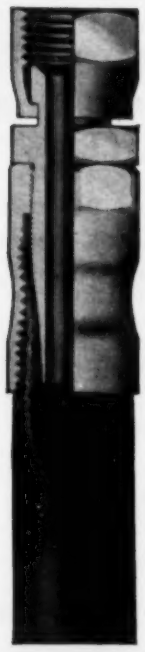
those who buy WEATHERHEAD do!

GET FAST DELIVERY FROM WEATHERHEAD DISTRIBUTORS COAST TO COAST

YOU'RE AHEAD WHEN YOU SPECIFY . . .
WEATHERHEAD

This trademark appears on every make of car, truck, bus, and tractor on equipment for machine tools, diesel and hydraulic applications on equipment for instrumentation, oil drilling, mining, road building for aircraft, railway, and marine engines for LP-Gas and anhydrous ammonia control equipment this symbol represents more than 1500 products made by Weatherhead

HOSE AND REUSABLE COUPLINGS



▲ For more details circle **NED-51 F4** on enclosed inquiry slip ▲

MARSHALLTOWN

Capacities from 18 Gauge to ½"
Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

Write today for details and prices.

MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

▲ For more details circle **NED-54 F4** on enclosed inquiry slip ▲

New electronic device controls batch weighing automatically, remotely

A leading rubber producer controls latex batch weighing automatically, remotely *and economically* with Baldwin SR-4 load cells. In an endless variety of applications, users of Baldwin SR-4 load cells have found them fast, accurate and economical for measuring load, fluid pressure or torque.

Send today for our latest bulletins! Address Department 3029, Baldwin-Lima-Hamilton Corporation, Philadelphia 42, Pa.

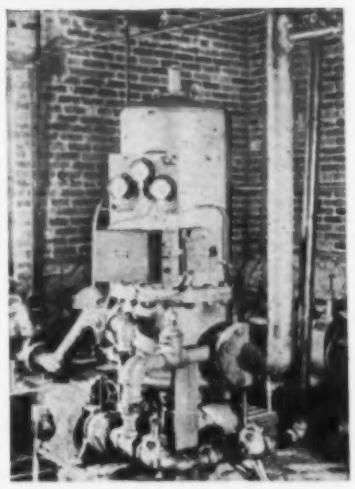
BALDWIN-LIMA-HAMILTON

Philadelphia 42, Pa. • Offices in Principal Cities
In Canada: Peacock Bros., Ltd., Montreal, Quebec

▲ For more details circle **NED-55 F4** on enclosed inquiry slip ▲

▲ For more details circle **NED-56 F4** on enclosed inquiry slip ▲

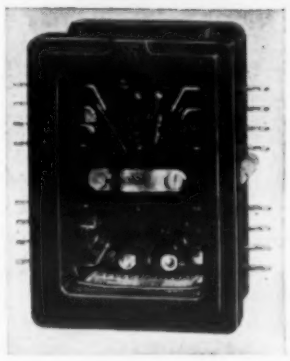
WATER & COOLANT FILTERS with capacities to 1275 gpm



Redesigned smaller Flo-Klean water and coolant system filters have long service life and improved performance. They have capacity up to 1275 gpm and a range of degree of filtration from 0.0025 to 0.030-in. (230 to 25 mesh). Backwash nozzle has hydraulically balanced discharge to reduce bearing and motor loads. Other types of filters are available with capacities up to 15,000 gpm with the same degree of filtration. Made by **Cuno Engineering Corp.**, Dept. 7073H, 80 S. Vine St., Meriden, Conn.

▲ For more details circle **NED-57 F4** on enclosed inquiry slip ▲

HIGH SPEED RELAY for 500,000 operations per day



Capable of operating 500 million times without failure, model KP relay can be applied to complicated circuits where sensitivity and high operating speeds are essential. It was originally designed for code control systems with up to 10,000 codes per day, with relay operating as often as 500,000 times daily at code speeds of 25 to 30 pulses per second. Operation can be on power from 5 to 150 milliwatts with operating time of 5 to 15 milliseconds, depending upon application. Relay is also available for pulsing speeds of 60 cycles. Polar rotary type unit may be either plug-connected or furnished with brackets for panel mounting. It measures 4 x 3 x 2 in. Made by **Westinghouse Air Brake Co.**, Union Switch & Signal Div., 1805 Braddock Ave., Pittsburgh 18, Pa.

▲ For more details circle **NED-58 F4** on enclosed inquiry slip ▲

Clear Plastic Sheet

Homalite Corp.—Homalite CR-39 clear thermosetting plastic sheet is covered in 4-page illustrated catalog 1052. Among its applications are use as glazing, protective guards, and instrument windows. Physical properties such as scratch resistance, strength, heat resistance and machinability are listed and other data are given. Mirrored plastic is described also.

▲ For more details circle **NED-59 F4** on enclosed inquiry slip ▲

FOR RUGGED DEPENDABILITY

There's no caster job too tough for the rugged, heavy-duty Hamilton Air-Flo!

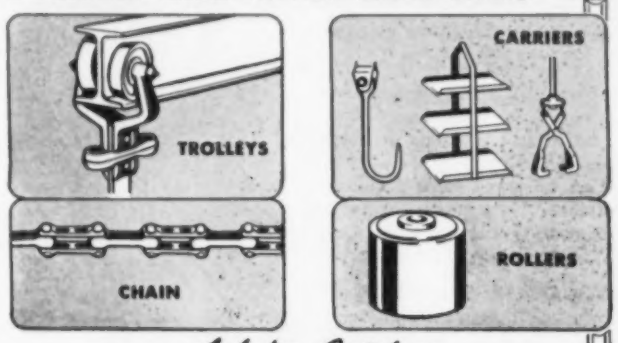
Cast steel top plate and yoke—heavy plate steel legs—1" diameter king bolt—double raceways, precision machined—wide-faced roller bearing wheels—hardened and ground spanner bushings—these are some of the features that make Air-Flo the dependable caster buy. Wheel sizes from 5" to 10" diameter—semi-steel, rubber-tired or molded plastic.

The Air-Flo is just one of many types of Hamilton casters—a model and size for almost every industrial purpose. Ask for catalog showing the complete line.

THE HAMILTON CASTER & MFG. CO.
1659 DIXIE HIGHWAY, HAMILTON, OHIO

▲ For more details circle **NED-60 F4** on enclosed inquiry slip ▲

WEBB CONVEYOR EQUIPMENT, PARTS and ACCESSORIES



Ask for Catalogs

No. 50—Trolley Conveyors
No. 51—Floor Type Conveyors
No. 52—Power & Free Conveyors
No. 453—Hand Pushed Trolleys, etc.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
Offices In Principal Cities

▲ For more details circle **NED-61 F4** on enclosed inquiry slip ▲

for good welding and brazing on Aluminum, Cast Iron and Stainless...

start with the right flux Amco

Each AMCO Flux is designed to do a specific welding or brazing job . . . to eliminate production problems and assure clean, strong bonding.

Select the AMCO flux suited to the job. There is one that will meet your exact requirements . . . speed work and cut costs.

AMCO 4013: assures perfect aluminum welding. It dissolves oxides completely and speeds melting and spreading of rod. Reoxidation of rod and base metal is eliminated.

AMCO 4015: produces strong, clean metal-to-metal brazed aluminum bonds. Work is free of pits, because the flux removed oxides and impurities from rod and base metal.

AMCO 433: for clean strong welds on stainless and all non-corrosive steels. It effectively removes oxide and eliminates reoxidation of rod and base metal at melting temperatures.

AMCO 4417: simplifies the brazing of cast iron. It produces soft, clean, ductible joints by completely eliminating scale and oxides.

Write for catalog describing the many advantages of these and other AMCO fluxes. If you have a welding or brazing problem, we'll solve it for you. Naturally there's no obligation.

AMERICAN SOLDER and FLUX CO.
Dept N
Trenton Avenue and Norris Street Philadelphia 25, Pa.

▲ For more details circle **NED-62 F4** on enclosed inquiry slip ▲

Got a DUST PROBLEM?

YOU NEED A . . .

DUPOR No. 46

U. S. B. of M. APPROVED RESPIRATOR

Big 46 sq. in. filter guards against all toxic or poisonous dusts. Guards against pneumoconiosis or silicosis producing dusts. Full panorama visibility. Can be worn with goggles or glasses. Maximum protection at economical low cost! Order sample today, $3.25 postpaid.

H. S. COVER, SOUTH BEND, IND.

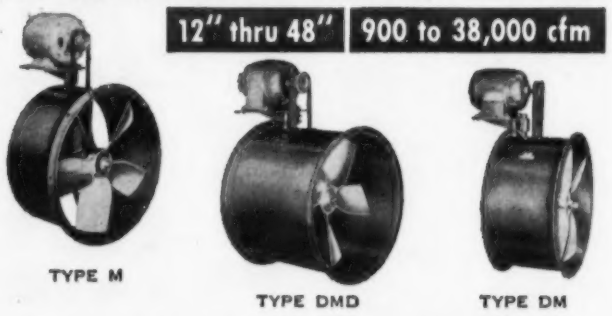
"Respirators for Industry since 1894"

▲ For more details circle NED-63 F4 on enclosed inquiry slip ▲

Exhaust Units

FOR GENERAL USE and HAZARDOUS LOCATIONS

12" thru 48" | 900 to 38,000 cfm



TYPE M TYPE DMD TYPE DM

Engineered for paint spray booths, ovens, dryers, hoppers, open surface tanks, swing sanders and grinders, laboratory hoods, polishing booths, down draft tables, grills, ranges, garage service pits, tumblers, planers, chipping tables, foundry shakeouts, etc.

WRITE FOR FREE FAN DATA-LOG

Shows at a glance how to handle practically any ventilation problem. Covers exhaust units, fan window mounting units, roof ventilators, shutters, weather canopies.

M&E MANUFACTURING COMPANY
2620 WINTHROP AVENUE
INDIANAPOLIS 5, INDIANA

▲ For more details circle NED-64 F4 on enclosed inquiry slip ▲

with PLASTIC ROCK!

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-safe wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries and railroads.

ASK FOR REPORT 220-N-6.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

▲ For more details circle NED-65 F4 on enclosed inquiry slip ▲

FOG SPRAY FIRE PUMP
5-gallon tank carried on back

Brass nozzle of the Champion Fyre Pump is adjustable from a 25-ft stream to a fine fog spray. Form-fitting tank of 5-gal capacity is carried on the back like a knapsack, allowing operator use of both hands. It has a slide-action pump and an auxiliary carrying handle on the cover. Pump is made of brass with self-cleaning bronze ball valves. Made by **Champion Sprayer Co.,** 6512 Heintz Ave., Detroit, Mich.

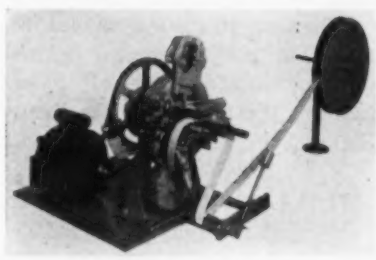
▲ For more details circle NED-66 F4 on enclosed inquiry slip ▲

SMALL PARTS CABINET
swinging racks are accessible

Six compartmented racks, each 2½ x 1 1/16 x 9½ in., swing from the mounting bracket of Swing-Bins small parts storage cabinet. Two screws mount the bracket on wall, under shelves or bench or in other locations. Clear plastic racks have dividers for separation into as many as four sections. They can be removed for cleaning and alternated to sides for storing of tall articles. Also available are 12, 18 and 24-drawer models. Made by **Akro-Mils, Inc.,** P. O. Box 989E, Akron 9, O.

▲ For more details circle NED-67 F4 on enclosed inquiry slip ▲

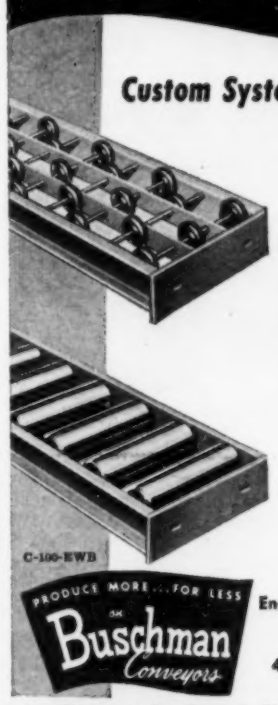
TAPE CUTTING MACHINE
improved model makes 7200 cuts/hr



Up to 3-in. wide flexible tape materials such as bands, ribbons, webbing, fabrics, straps, facings, insulation, paper and tubing can be cut in lengths from 2 to 160 in. at speeds up to 7200 cuts per hour by improved GM 5 and 6 tape cutting machine. Unit occupies 17 x 24-in. bench space, making it practical for congested or small shops. The GM bias machine cuts material at 30-degree angle, one or both ends, with maximum cutting width of 1⅛ in. Special unit is offered for cutting nylon ribbon and sealing ends with heated knives. Made by **Artos Engineering Co.,** 2751 S. 28th St., Milwaukee 46, Wis.

▲ For more details circle NED-68 F4 on enclosed inquiry slip ▲

Buschman Wheel and Roller CONVEYORS



Custom Systems from Standard Units

Gravity conveying systems to meet your needs are set up quickly from Buschman wheel and roller components. Lightweight aluminum or steel construction and Quick-Eez coupling make rearrangement fast and easy.

Buschman wheel and roller components include straight and curved sections in three widths, switches, adjustable tubular stands and accessories.

Buschman wheel and roller conveyors are stocked at the factory and by leading distributors throughout the country, who can engineer systems to meet your needs.

Write today for Bulletin 15

C-100-EWB

PRODUCE MORE...FOR LESS
Buschman Conveyors

Complete Conveyor Systems
For All Types of Industries
Engineered • Manufactured • Installed

THE E. W. BUSCHMAN CO.
4482 Clifton Ave. • Cincinnati 32, Ohio

▲ For more details circle NED-69 F4 on enclosed inquiry slip ▲

SEALMASTER
BALL BEARING UNITS
Quality BEARING UNITS *Meet All Your Requirements!*
FACTORY REPRESENTATIVES AND DEALERS IN ALL PRINCIPAL CITIES

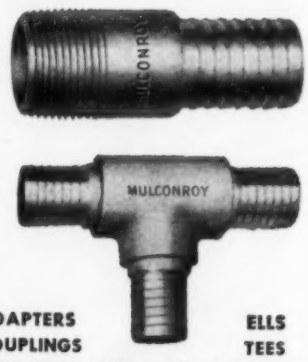
WRITE TODAY FOR BULLETIN #454

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

▲ For more details circle NED-70 F4 on enclosed inquiry slip ▲

METAL FITTINGS
For Flexible
PLASTIC PIPE...

Made exactly for Plastic Pipe Sizes. Assure easily-made, efficient, durable connections on every type of installation. Electroplated steel or Brass. *Ask your Distributor, or write for illustrated folders.*



ADAPTERS ELLS
COUPLINGS TEES
WELL-SEAL ELLS and PRIMING TEES • VENTURI JET ADAPTERS
UNDERGROUND SPRINKLER ELLS AND TEES • WATER MAIN ADAPTERS, ETC.

"MULCONROY *Starts...* WHERE OTHERS *Stop!*"

MULCONROY COMPANY Since 1887
5331 JEFFERSON ST., PHILADELPHIA 31, PA.

▲ For more details circle NED-71 F4 on enclosed inquiry slip ▲

FOR FAST, ECONOMICAL PARTS CLEANING

DRUM MAJOR VAPOR DEGREASER

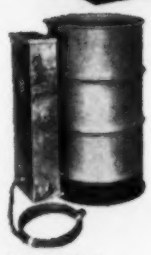
Built for heavy-duty use, Drum Major *portable* degreasers clean up to 400 pounds of machinery parts per hour. Grease and scum are completely removed.

You will save time and labor with Drum Major, too. Just "plug in" near work area. Drum Major's heavily *galvanized* drum and condenser assure long, trouble-free service.

Moderate price includes work basket (on 55-gallon type only) and delivery allowance. Solvent spray degreaser available at extra cost.

Write for Currier Degreaser Bulletin.

● A few distributorships are still available in the East & Midwest.



Model "W" (55-gallon drum) available with water condenser or electric controls. (shown above)

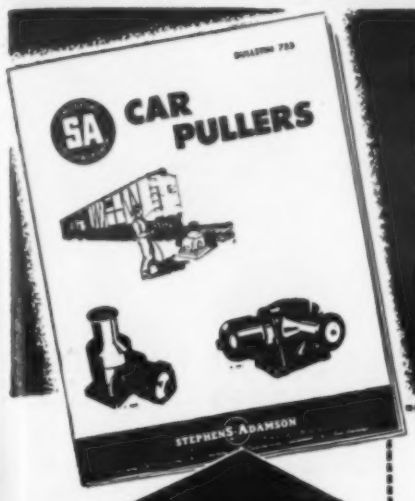
Also available in 15-gallon **"Majorette"** size for extra-low-cost operation.

LEADS THE PARADE IN DEGREASING
Made only by
CURRIER Company
P. O. BOX 126 • OAKLAND 4, CALIFORNIA

▲ For more details circle NED-72 F4 on enclosed inquiry slip ▲

Please Pass this Issue of NEW EQUIPMENT DIGEST Along to Your Co-Worker

To Use this



MOVE UP TO 6 or MORE CARS with JUST ONE MAN!

Get this **SAVINGS STORY NOW**

How S-A Car Pullers cut demurrage, reduce labor requirements, save time, promote safety.

SMALL INVESTMENT

Priced from **$595.00**

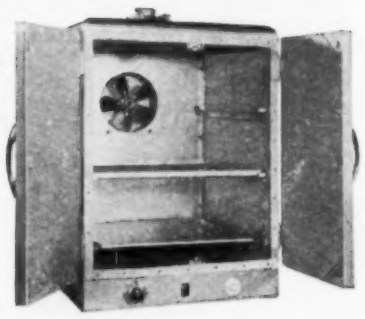
F.O.B. Aurora, Illinois
State or local sales tax extra
MAIL THIS COUPON NOW FOR BULLETIN NO. 753

STEPHENS-ADAMSON MFG. CO.
Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Show me how I can cut car handling costs. Send Bulletin No. 753.
Name.....
Company.....
Address.....
City..... Zone..... State.....

▲ For more details circle **NED-76 F4** on enclosed inquiry slip ▲

NEW! VALUE PACKED!

JUNIOR UTILITY OVEN



LOW COST • EASY TO OPERATE • MINIMUM MAINTENANCE

Ideal for

- DRYING
- BAKING
- CURING
- PROCESSING
- HEAT TREATING

Here is a new line (4 models, temperature ranges up to 1000°F.) that incorporates every possible advantage of experienced oven design. Use the Jr. Utility Oven for economical manufacturing, product control, sample testing, etc. External dim. 24" x 24" x 34" high. Handsome gray hammertone finish. Write for complete data on new, advanced features.

NEW ENGLAND OVEN & FURNACE CO.
POST ROAD, ORANGE, CONN.

▲ For more details circle **NED-77 F4** on enclosed inquiry slip ▲

Long Life...Low Net Cost

HAMILTON VARI-PURPOSE HOSE

For higher than average pressures of air, water and a wide range of other materials used by many different kinds of industries.

Withstands deteriorating action of:

OIL	WEAK INORGANIC ACIDS
GREASE	FARM SPRAY SOLUTIONS
GAS	ACETYLENES AND PAINTS (but not lacquers)

Available in standard lengths. Red or black covers. Sizes ¼" to 1½" I.D. with working pressures 125 to 300 lbs.

Write for detailed specifications.

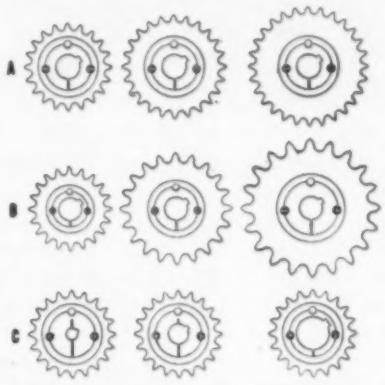
"Better Performance Through Progress Since 1870"

HAMILTON RUBBER MFG. CORP.
103 Meade St. Trenton, N. J.

▲ For more details circle **NED-78 F4** on enclosed inquiry slip ▲

ROLLER CHAIN SPROCKETS
larger sizes added—line covers chain sizes from 40 through 160

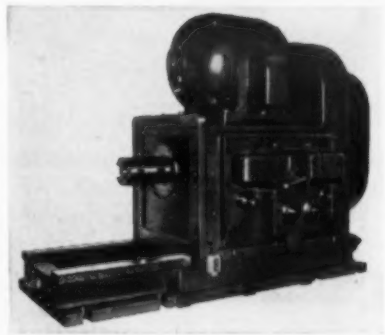
"Off-the-shelf" line of Taper-Lock roller chain drive sprockets has been expanded to include 1½, 1¾ and 2-in. pitch sizes. Line now consists of sprockets and bushings covering chain sizes from 40 to 160. Feature of design (*NED—April* '53) is that small inventory covers large variety of drive shaft sizes through use of interchangeable locking bushings.



Sprockets are easily and securely mounted on the shaft by tightening set screws, and can be removed with equal facility. Sprockets up through the 26-tooth size are made from high carbon steel and can be hardened. Larger sprockets will be available in close-grained semisteel. Illustration shows (A) three different sprockets used on one shaft size with the same bushing, (B) increased range possible by using different bushings having the same bore and (C) how one sprocket can be applied to different shaft sizes using interchangeable bushings. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

▲ For more details circle **NED-79 F4** on enclosed inquiry slip ▲

HYDRAULIC FEED UNIT
mounts on machine bed or column



Production of work pieces or operations requiring drilling, reaming, boring, facing or milling are performed on this self-contained hydraulic feed unit. It can be mounted on any machine bed or column at any angle. Removable heads can be interchanged as desired, or units themselves can be interchanged to create wide range of production equipment. Power pack panel slides entirely out of the unit. Panel, valves and pump are standard Vickers equipment, with panel and controls mounted on either right or left side. Unit cycles automatically through rapid approach, feed, rapid return and shut off. Hydraulic feed is valve-controlled and infinitely variable. Dwell can be incorporated in automatic cycle. Range of speeds is possible with pick-off gears, depending on the drive motor used. Made by **Hoefer Mfg. Co.**, Dept. R, Freeport, Ill.

▲ For more details circle **NED-80 F4** on enclosed inquiry slip ▲

UNUSUAL BARGAINS

SAVE TIME AND MONEY ON INSPECTIONS!

A $225.00 Value *Only* **$95** Postpaid

STEREO MICROSCOPE
With Changeable Objectives

Wide, 3-Dimensional Field — Excellent Working Depth

Fine, imported Binocular Microscope at a substantial saving. Used for inspections, examinations, counting, checking, etc. Erect image for easy interpretation. You get 2 pairs of eyepieces, 2 pairs of objectives (slide in and out on machined surfaces). Power range from 13X to 75X. Variable inter-ocular distance. Will accommodate standard eyepiece reticles. Rack and pinion variable tension focusing. Hardwood carrying case included. Accessories available. Recommended for lab, shop, factory or home use. We guarantee complete satisfaction or your money back.

Order Stock No. 70,036-AE, $95 ppd
Send Check or Money Order or order on open account.

40X-50X-60X

VARIABLE POWER

PEN MICROSCOPE

A very handy "pocket" instrument for quick, easy spot-checking and inspection. It's light, sturdy, powerful! Pen clip is reversible. When reversed, clip rests on surface, provides automatic focus, serves to steady scope. Grey enamel finish. Closed length 3⅛".

Stock No. 30,100-AE ..... $3.95 Postpaid

(Send check or M.O., or order on open acct.)

GET FREE CATALOG "AE"

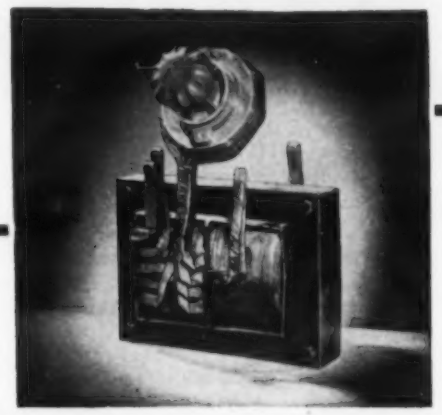
If you haven't seen our big, FREE Catalog, you don't know what you're missing. Fantastic variety—never before have so many lenses, prisms, optical instruments, and components been offered from one source. Positively the greatest assembly of bargains in all America. Imported! War surplus! Telescopes! Microscopes! Hand Spectroscopes, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get optical items. Write for FREE CATALOG "AE".

EDMUND SCIENTIFIC CORP., Barrington, N. J.

▲ For more details circle **NED-81 F4** on enclosed inquiry slip ▲

A Dependable Source of SPECIALTY TRANSFORMERS

Power Type
50 Watts to 5 KVA
Class A or H Insulation



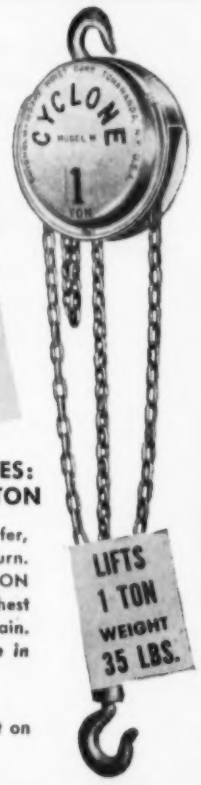
Can be furnished with 8-point tap changing switch. We invite your inquiry on transformers which will match your specific requirements.

THE STRONG ELECTRIC CORPORATION
4 City Park Avenue • Toledo 2, Ohio
Quality Electrical Equipment for a Third of a Century

▲ For more details circle **NED-82 F4** on enclosed inquiry slip ▲

RECEIVING...PRODUCTION... WAREHOUSE...SHIPPING... MAINTENANCE

every department can use the CM CYCLONE HIGH-SPEED—HEAVY DUTY—ALUMINUM ALLOY CHAIN HOIST



CAPACITIES: ¼ TO 10 TON

● Help your men get lifting jobs done quicker, safer, with less physical effort. Increase labor dollar return. PORTABLE—Carry with one hand. EASY OPERATION—Less hand chain pull. LOW HEADROOM—Highest possible lift. HERC-ALLOY flexible welded load chain. Lifetime lubrication. *More CYCLONE Hoists are in use today than any other hoist in their class.*

CYCLONE CATALOG NO. 145
Illustrates, describes and prices all models. Sent on request or ask your CM Distributor.

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

▲ For more details circle **NED-83 F4** on enclosed inquiry slip ▲

PROTECT - WORKERS

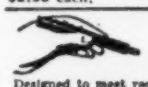
Susan Dale Safety Net Visor

Designed for protection against the hazards of machinery, protects all the hair. Cool to wear, light in weight. Adjustable to all head sizes. Green opaque visor eliminates glare from overhead lighting and reflection from shiny metals. GS No. 41 Visor with net, **$2.95** dozen.

GS Eye Sweep

Magnet-and-loop combination for removing metallic particles, dirt, chips, any foreign matter from the eye. Magnetic tip easily picks up the smallest piece of iron or steel. Flexible loop is very convenient for removing cinders, dirt, and non-magnetic particles. Sterilization will not affect magnetic properties or loop. A hard rubber carrying case is provided. **$2.50** each.

GS Little Giant Magnet



Designed to meet requirements for powerful yet safe magnet adaptable to scores of industrial, laboratory and household uses. Supported by helical spring attached to block slideable within casing. Magnet may be fully or partially extended. Pocket clip is provided. #14, **$6.50** (super strength). Diam. ⅞", total length of instrument 6¼".

Emergency Light

Prepare for unexpected light failures. Gives instant automatic emergency lighting protection—no wiring. Plugs into any 110 volt A.C. wall outlet (D.C. available). Light comes on instantly and automatically from power supplied by attached battery. (Clamps on standard Burgess 6 or 7½ volt battery). For use in homes, offices, restaurants, stores, hotels, theatres. Head is adjustable in any direction. Price: **$16.95** without battery; **$21.00** complete with battery.

Safti-Mitt Handpads

For every man who handles rough or heavy work. Thumb-type handpads, designed by specialists in safety gloves, offer maximum protection and comfort. Adjustable to any size, snap-fastened strap keeps pad on, makes removal easy. Cool, comfortable. Heavy genuine horsehide for long wear. Widely used by millwrights, stevedores, and for handling corrugated cartons, bricks, building blocks, machinery. In shipping rooms, stock rooms, throughout industry. No. 1285, **$1.15** pr. **$12.40** dozen pair.

GS Knee Pads

For every "down-on-the-knees" job! Vital wherever and whenever work is done on the knees — flooring, laying cement, tile setting, roofing, painting, scrubbing, etc. **$2.50** pair.

Saftee Carboy Tilter

One-man operation, no spilling. Requires light pressure only to tilt, rocks back to upright position when released.

Type GS11 Tilter, **$22.50**
With Saftee-Flo Spout **$25.00** F.O.B.

Latex Finger Cots

Three sizes: large, medium and small. Protect fingers. Packed 6 dozen to box. No. 2896. Gross, **$4.80**.

General Scientific Equipment Co.
2701 W. Huntingdon St., Philadelphia 32, Pa.
Gentlemen:
Please ship the following products:.....
Please send complete catalog ☐
Name.....
Firm Name.....
Address.....
City..... Zone..... State.....

A DEPENDABLE GUIDE TO "SAFETY"
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

▲ For more details circle **NED-84 F4** on enclosed inquiry slip ▲

PROTECT YOUR HYDRAULIC SEALS with the IMPROVED Seal-Guard®

METALLIC ROD WIPERS

Here is a BETTER WAY to insure long life for cylinder rod packings, bearings, machine spindles, guide pins.

Seal-Guard's flexible bronze, knife-edge wiping rings mould themselves to the shaft contour . . . peel off dirt and grime . . . lift it entirely away from the shaft—no packing or crowding under.

- No chance of fouled bearings or packing.
- Can't damage shaft surfaces.
- Seal-Guards are available to fit rod diameters from ½ to 10 inches. Other sizes by special order.

Write for descriptive literature.

HYDRAULIC ACCESSORIES CO.
24301 Hoover Rd. Van Dyke, Mich.

For more details circle NED-85 F4 on enclosed inquiry slip

READ WHAT BLOOMER OF CHICAGO SAYS ABOUT WALES HOLE PUNCHING UNITS MONEY AND TIME SAVING FEATURES . .

BLOOMER HEATING & VENTILATING CO.
Contractors · Fabricators
1837 WEST 47TH STREET · CHICAGO 9, ILL.
FRONTIER 6-2233

February 26, 1954

Wales-Strippit Corporation
408 Madison Avenue
Oak Park, Illinois

Attention: Mr. Homer C. Gray

Gentlemen:

Very seldom in the operation of a fabricating plant have I come across such cost and time saving opportunities as have been made possible by Wales Hole Punching Units.

To give you a little background, my company bid a job, based on our former gang punching method of tooling, and after we received the order as low bidder, I investigated and bought Wales Units. In addition, we purchased another press brake. The cost records show that we not only paid for these Wales Units and the press brake with this one job but also made our normal profit on the job. We also bettered our delivery estimate by six weeks. Since the completion of this first order I have been using these same Wales Units on similar jobs.

My experiences have proven that setups with Wales Units are eight times faster than our former gang punching methods. Press downtime between setups is practically eliminated by mounting these Units on templates outside the press and just placing the entire assembly on the press bed, ready to start punching.

We were able to double the rated press capacity by staggering the shut height of Wales Units with caps on top of punches. Your Wales Units eliminate stripping problems, spoiled work from improper stripping and broken punches.

I thought you would be interested in these highlights of my experience with your tooling equipment and so I am enthusiastically passing along to you the results of my experiences with Wales Hole Punching Units. I am also enclosing photographs of your equipment in operation.

Very truly yours,
BLOOMER HEATING & VENTILATING COMPANY
E. Ellis
E. Ellis
Plant Superintendent

EE:vp

"NOT ONLY PAID FOR THESE WALES UNITS AND THE PRESS BRAKE BUT ALSO MADE OUR NORMAL PROFIT ON THE JOB"

"ELIMINATE STRIPPING PROBLEMS, SPOILED WORK FROM IMPROPER STRIPPING, AND BROKEN PUNCHES"

"SETUPS WITH WALES UNITS ARE 8 TIMES FASTER THAN OUR FORMER GANG PUNCHING METHODS"

"ABLE TO DOUBLE THE RATED PRESS CAPACITY BY STAGGERING SHUT HEIGHT OF WALES UNITS WITH CAPS ON TOP OF PUNCHES"

This letter from Bloomer Heating & Ventilating Company points out typical time saving and money saving advantages that are also experienced by the thousands of users of Wales Hole Punching Units.

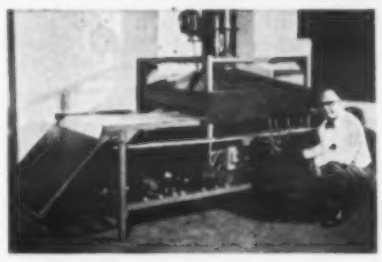
Patented, independent, self-contained Wales Units permit the same group of units to be used and reused in unlimited hole punching setups without aligning punches and dies in the press.

Write for the fully-illustrated, functionally colored catalogs that completely describe Wales Hole Punching Units.

WALES-STRIPPIT CORPORATION
George F. Wales, Chairman
363 Payne Avenue, North Tonawanda, N. Y.
(Between Buffalo and Niagara Falls)
Wales-Strippit of Canada, Ltd., Hamilton, Ontario
Specialists in Punching and Notching Equipment

For more details circle NED-86 F4 on enclosed inquiry slip

DRYING TUNNEL KITS incorporate far-infrared heaters

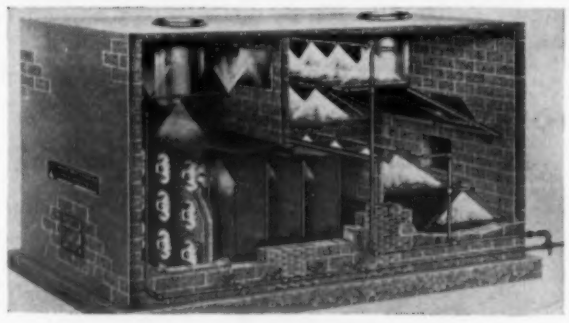


Designed for screen process and other production drying work, Air-Flow drying tunnel kits make use of Chromalox far-infrared electric heaters. Two models each have belt speeds varying from 5.6 to 23.4 fpm. Heat intensity can be varied between 4 and 100 per cent of capacity. Each kit provides components for constructing tunnel with 26-in. wide belt. One unit has three heaters of 2.5 kw each, the other six heaters of the same rating. Other parts include framing, transmission, drive motor, fan, heat control and other accessory equipment. Simple and complete directions are also given. Made by **Edwin L. Wiegand Co.**, 7509 Thomas Blvd., Pittsburgh 8, Pa.

For more details circle NED-87 F4 on enclosed inquiry slip

DUST REMOVAL SYSTEM liquid precipitating type units have 8000-60,000 cfm capacities

Housings for the type H liquid precipitating stack gas scrubber can be built by the user as a permanent installation or, if made of fabricated steel, as a port-



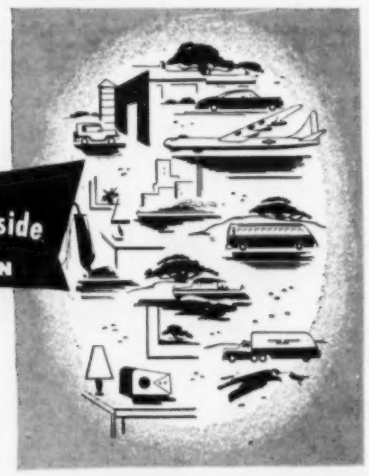
able unit. All connections are made to existing ducts. Scrubber removes large volumes of dust from cyclones, rotary dryers, kilns, roasters, mixers, pulverizers and similar installations. Dust particles of submicron sizes are removed, even at extremely high dust loadings.

Eight models are available that can handle high temperature gases in capacities ranging from 8000 to 60,000 cfm. About 2½ gpm of water at 40 to 50 psi is required per 1000 cfm. Average draft load is about 2 in. water column. Additional scrubber stages can be added if greater dust removal capacity is required.

Precipitator elements can be adapted to meet varying conditions and spray capacities changed to meet special requirements. Dust removed is reduced to a watery sludge which can be discharged into a tank or pond. Made by **Johnson-March Corp.**, Dept. NED, 1724 Chestnut St., Philadelphia 3, Pa.

For more details circle NED-88 F4 on enclosed inquiry slip

CASTINGS on the lighter side by WELLMAN



Chances are no matter what business you're in, there's a WELLMAN aluminum or magnesium casting somewhere in the picture.

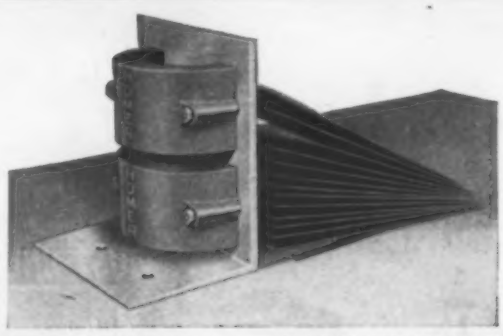
For almost half a century, our four complete plants and experienced personnel have been producing castings on the lighter side to meet many requirements.

Let us hear from you, or write for our new catalog No. 53.

Well-Cast MAGNESIUM AND ALUMINUM CASTINGS
Well-Made WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.
Dept. 15, 12800 Shaker Boulevard Cleveland 20, Ohio

For more details circle NED-89 F4 on enclosed inquiry slip



SAVE HANDS . . . SAVE FINISHES SAVE MONEY

WITH HOMER MAGNETIC SHEET FLOATERS

Homer magnetic sheet floaters make it easy to handle irregular or odd shaped stacks of steel sheets. They eliminate danger to the operator due to sharp edges . . . they speed up handling time by continuously floating the top sheets, as the sheets are removed. They prevent double feeding, protecting dies and machinery. Oily, polished or painted sheets are handled without prying, scratching or marring the surfaces.

Homer magnetic sheet floaters are constructed with cast frames, to which powerful Alnico V permanent magnets are attached. Frames may be clamped or bolted into operating position.

Homer magnetic sheet floaters are available in three sizes to handle sheets from 14 mil stock to ¼" plate. Multiple units can be used when necessary.

Write for bulletin and prices. Deliveries—immediate!

THE HOMER MANUFACTURING CO. INC.
DEPT. 1-25 LIMA, OHIO

For more details circle NED-90 F4 on enclosed inquiry slip

VANTON PUMP TAMES CORROSIVE CHEMICALS

rigid-unplasticized PVC flex-i-liner PUMPS

are designed to handle the toughest corrosive chemicals and abrasive slurries.

The durable precision molded flexible liner and the pump body block are the only parts contacting the fluid.

- No stuffing boxes, shaft seals, check valves, glands or gaskets to worry about.

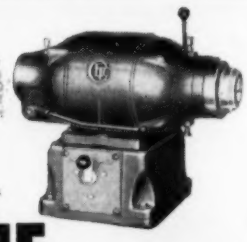
Body blocks in Polyethylene, Bakelite, Buna N Hard Rubber, unplasticized PVC, Stainless Steel. Flexible liners in: Natural and pure gum rubber, Neoprene, Hycar, Buna N, Vinyl, Compar and Silicone. The wise choice of materials means trouble free, corrosion free service.

Pump capacities from fractional to 20 gpm. Illustrated booklet on request, as well as descriptive literature on complete line of corrosion resistant centrifugal pumps, valves, pipe and fittings.

VANTON PUMP & EQUIPMENT CORP.
EMPIRE STATE BLDG. NEW YORK 1, N. Y.

For more details circle NED-91 F4 on enclosed inquiry slip

The Cincinnati



HOLLOW SPINDLE SPEED LATHE

A Name Among Names that Stands for Fast, Versatile, Flexible Burring and Finishing

Regardless of what you call it — Burr Head, Reamer Driver, Burring and Reaming Machine, or Speed Lathe — the results to small parts producers is the same; satisfactory results in the form of better finishing. Hollow spindle construction means it's especially adaptable to tubing and bar stock, in a wide range of sizes. Why rob production time from make-shift, adapted machines designed and needed for other operations? The Cincinnati Speed Lathe offers a range of types, voltages, speeds and capacities. It's available for pedestal installation, too.

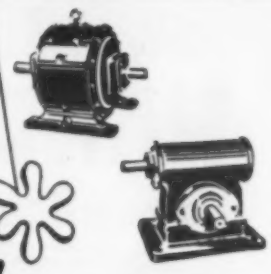
Quality Equipment Since 1902

Profit from the complete story. Write for Catalog 54-WJ

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

For more details circle NED-92 F4 on enclosed inquiry slip



Abart SPEED REDUCERS

specially

cut your operating cost
save valuable plant space
minimize maintenance .....

because Abart Speed Reducers are the product of specialists . . . designed and built by craftsmen *long and specially* experienced in the principles of power transmission . . . you can depend on Abart units for the service required. *Efficient—Durable—Compact—Self-Lubricating* Abart Speed Reducers are available in 75 sizes in spur, worm and combination, single and double reduction units—rated from 1/50 to 168 hp. with ratios up to 10,000 to 1.

Write today for free data-packed pocket-size catalog

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears, Speed Reducers and Gearmotors

For more details circle NED-93 F4 on enclosed inquiry slip

you can easily make

every step a safe step

Indoor or outdoor, you can rely on Blaw-Knox Stair Treads to provide the safety you want in your plant.

Designed for tremendous strength against impact, these stair treads are made with twisted cross bars and rolled diamond checkered plate nosing—as illustrated.

But, when desired, you can get treads with a twisted cross bar nosing or an abrasive nosing. And for specially slippery conditions we can supply you with serrated cross bar treads.

Just tell us what your application is and we'll offer our recommendations as to the best type of tread for your job.

Only Blaw-Knox Electroforged® Steel Grating and Stair Treads —have these five exclusive features:

1. rigid one-piece construction —easy to install
2. all surfaces accessible—easy to paint
3. no sharp corners to clog—self-cleaning
4. maximum open area—for light and ventilation
5. non-slip twisted crossbar—safe footing

A short note will bring you a copy of new Bulletin No. 2365-R—a dimensional sketch will bring you a quotation

BLAW-KNOX

BLAW-KNOX COMPANY
2068 Farmers Bank Bldg., Pittsburgh 22, Pa.
BLAW-KNOX EQUIPMENT DIVISION GRATING DEPARTMENT

GRATING APPLICATIONS: floors • platforms • walkways • catwalks • stair treads • fan guards • shelving • and many other uses, both outdoors and indoors, for versatile steel grating.

For more details circle NED-94 F4 on enclosed inquiry slip

TWIN DRUM TUMBLING BARREL
has three interchangeable drum sizes for deburring and luster finishing

Two drum type tumbling barrel known as the Esbec Super Twin is practical unit for either high production of small parts or for pilot plant development of techniques. It is equally useful for deburring, radius forming, micro-inch finishing or high luster burnishing. Interchangeable drum sizes of 1.0, 2.0 and 3.3 cu ft are available and all have 400-lb weight carrying capacity.

Unit features drums supported by self-aligning pillow blocks on both sides, self-aligning drive shafts, special hub cradles which automatically position drums, hoisting eyes in each drum, counterweighting of drums, built-in hot and cold water pipes, built-in speed indicator, built-in separating device and walled-off driving mechanism. Motor is ¾-hp, 220/440-v, three-phase, 60-cycle type. Made by **Tumbling Sales & Service Co.**, Dept. ED, King St., Greenwich, Conn.

For more details circle NED-95 F4 on enclosed inquiry slip

LIQUID LEVEL VIEWER
for pressure sealed systems and temperatures from —50 to 300° F

Checking pressure-sealed systems for liquid level, gas-liquid ratio, cleanliness of liquid and operation of sealed valves and linkages are principal applications of Level Eye liquid level viewer. It is suitable for temperatures ranging from −50 to 250° F and for hydraulic pressures up to 300 psi. Special units are available for higher pressures and a frost shield can be added to keep window clear in extreme low temperatures.

Illustrated reflecting prism type lens reflects light where there is no liquid behind the glass, while liquid behind glass causes it to appear black. It is not fouled by dirt or oil in the liquid and does not require a second lens for illumination. Transparent lens also available is mounted in pairs to give clear vision of contents of the container. Diameter of viewer face is 1½-in. Housing is available with male threads or with provision for welding, while two lengths cover standard thickness and heavily insulated vessels. Made by **H. A. Phillips Co.**, 3257 W. Carroll Ave., Chicago, Ill.

For more details circle NED-96 F4 on enclosed inquiry slip

How to bond steel's **brawn** to aluminum's **lightness**

Alumibond. unique casting of aluminum to ferrous metals

An amazing new process—ALUMIBOND—enables you to combine the best qualities of aluminum and ferrous metals. If you have problems involving heat transfer, joining, weight saving, oxidation resistance, bearing surfaces—Alumibond can do an unusually successful job for you providing bond strength of 18,000 psi at interface junctions. Leading engineers now employ Alumibond to aid resistance to corrosion, for greater conductivity or heat dissipation, for more free machinability. In hundreds of similar applications, Alumibond can solve your design and production problems.

Write today for new Alumibond booklet

ARTHUR TICKLE ENGINEERING WORKS
20 Delevan St., Brooklyn 31, N.Y. MAin 5-4200

For more details circle NED-97 F4 on enclosed inquiry slip

with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

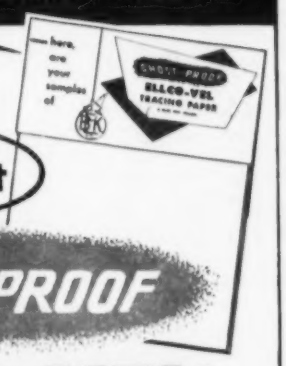
For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-98 F4 on enclosed inquiry slip

MAKE YOUR OWN TOUGH DRAWING-BOARD TEST!

Send for this FREE sample kit



GHOST-PROOF

ELLCO-VEL®
TRACING PAPER

You can erase and erase this blue-tint as many as 5 or 6 times after repencilling. Pencil lines vanish completely and thoroughly. Not even the shadow of a ghost shows on white or blue prints. It's Ghost-Proof! But find out for yourself. Send for tough, durable ELLCO-VEL samples now.

B. K. ELLIOTT CO.
PITTSBURGH • DETROIT • CLEVELAND

WRITE DEPT. 51E • 126 SIXTH ST. • PITTSBURGH 22, PA.

For more details circle NED-99F4 on enclosed inquiry slip

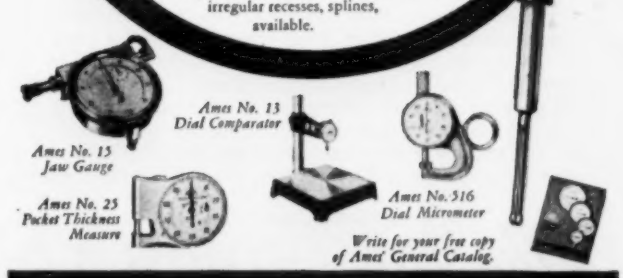
AMES

...the *Preferred* Small Hole Gauge No. 36

Skilled and unskilled employees can use this superbly designed two-point contact gauge to make quick, accurate, *impersonal* inspections of small holes for size, taper and roundness.

The spherical contact point automatically centers itself and indicates the true diameter at the point measured.

The Ames Small Hole Gauge No. 36 checks holes with 3/16" to 1" diameter, up to 2" deep. Longer lengths and special contacts to check irregular recesses, splines, available.



Write for your free copy of Ames' General Catalog.

Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

For more details circle NED-100 F4 on enclosed inquiry slip

FREE air compressor fact folders

Get the low-down on air compressors — ask today for these new fact folders.

They tell you all about air compressors — how to select them, how to care for them and how to put them to work at new and different jobs.

Write to Worthington Corporation, Section PC. 4.13B, Merchandising Division, Harrison, N.J.

PC.4.13

WORTHINGTON

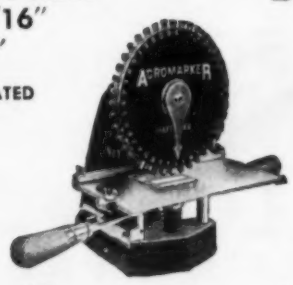
▲ For more details circle **NED-101 F4** on enclosed inquiry slip ▲

ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER

NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS



NON-TIRING FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR

DIE WHEELS AND DIES ARE REPLACEABLE.

The ACROMARK Company

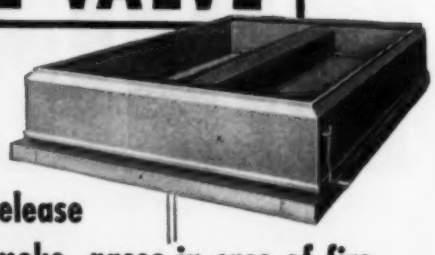
7-11 MORRELL ST., ELIZABETH 4, N. J.

"THE ORIGINAL MARKING SPECIALISTS"

▲ For more details circle **NED-102 F4** on enclosed inquiry slip ▲

Now..Swartwout FIRE VALVE

opens in seconds



for quick release of heat, smoke, gases in case of fire

New Aid for Limiting Fire Spread

Fire Valve provides unobstructed opening whenever under-roof temperature reaches a predetermined point. Each unit supplies 46 sq. ft. of free area opening when the two dampers drop, released by a fusible link. Can also be opened by emergency pull chain. Units are only 21 in. high. Permit fighting fire from roof. Fire Valve serves as extra ventilation when needed, in good weather. It's weatherproof when closed and can be insulated to reduce heat loss. Write for additional information.

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

▲ For more details circle **NED-103 F4** on enclosed inquiry slip ▲

GEAR SELECTOR

manually or automatically fed to separate three classifications

Satisfactory, oversize and undersize gears can be automatically separated into those three categories by this automatic gear selector. It can be coupled to inspect any spur or helical gear at a rate faster than it can be produced by shaving or hobbing machines, gear shapers or other gear tooth cutting or finishing machines. Gears can be individually fed by hand or automatically fed without operator attention into this sorting instrument.

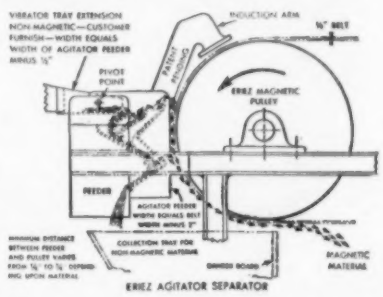
An automatic shutoff can be furnished, together with a counter, to stop machine production if any number of consecutive gears are rejected (number is optional) or if percentage of rejects on a given run exceeds set limits. Two accurate master gears, one of which is motor driven, are used to check the production. Gears in three categories are discharged from separate exits to chutes or bins. Made by **Michigan Tool Co.**, 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle **NED-104 F4** on enclosed inquiry slip ▲

MAGNETIC AGITATOR

reclaims high alloy tramp steels from grinding and polishing media

A practical means of separating high alloy metals having magnetic content of 20 per cent or more from such nonmagnetic materials as grinding and polishing media is provided by this magnetic agitator separator. Unit combines agitator feeder with nonelectric magnetic belt-pulley having alternate north and south poles parallel to pulley shaft. As pulley revolves, pulsating magnetic field extending from its surface causes magnetic portion of material being fed into agitator to tumble or "walk" across inclined baffles until it reaches pulley where it is held on moving belt which passes it beyond magnetic field.

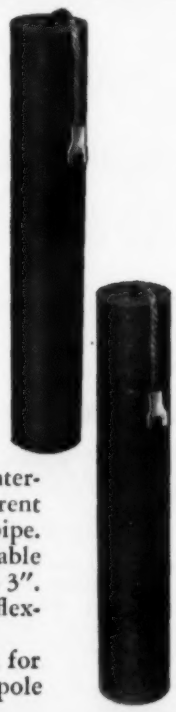


ERIEZ AGITATOR SEPARATOR

At this point magnetic metal drops automatically into tray and nonmagnetic material striking baffles in the agitator feeder fall freely down inclines into separate tray. Unit will readily reclaim steel dust resulting from grinding surface scale from high alloy steel billets. Magnetic strength is derived from powerful Alnico V units which will, reportedly, last indefinitely. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle **NED-105 F4** on enclosed inquiry slip ▲

RUST PROTECTION *with* carbon ground rods



A typical rust prevention use for Stackpole carbon ground rods is in the cathodic protection of pipe lines from external corrosion. Used as anodes, the rods are placed at intervals and a low-potential direct current applied between them and the pipe.

Stackpole ground rods are available in lengths to 60" and diameters to 3". They are equipped with sealed flexible copper leads.

Send details of your application for prompt recommendation by Stackpole engineers.

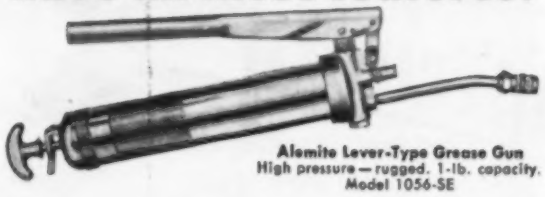
STACKPOLE

STACKPOLE CARBON COMPANY, St. Marys, Pa.

"EVERYTHING IN CARBON BUT DIAMONDS!"

▲ For more details circle **NED-106 F4** on enclosed inquiry slip ▲

Only ALEMITE HAND GUNS have all these features!

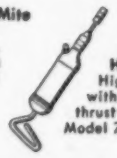


Alemite Lever-Type Grease Gun
High pressure—rugged. 1-lb. capacity.
Model 1056-SE

- High pressure pistons of hardened steel, machined to exact tolerances!
- All parts precision fit for longer life, easier operation.
- Long operating handles with heavy steel linkage.
- All available with fittings for automatic loading.
- Built for easy servicing—built-in ball checks easy to clean.

Alemite Heavy-Duty Lever Gun
Big gun for tough jobs.
24-oz. capacity.
Model 6243-J

Dyn-O-Mite Gun
10,000 lbs. pressure with easy one-hand action.
Model 7132-B



Push-Type Hand Gun
High pressure with simple thrust action.
Model 7584

COMPLETE Alemite Industrial Equipment Catalog FREE! Send for your copy today. Write: Alemite, Dept. NED-64, 1850 Diversey Parkway, Chicago 14, Ill.

ALEMITE SW

▲ For more details circle **NED-107 F4** on enclosed inquiry slip ▲

Let Us Prove...

better, faster production at lower cost

Precise concentricity for long tool life and smooth cut

Correct spiral for fast cutting

High polish promotes chip flow

Improved rake angles for minimum loading

job-engineered, master-machined

Choose FORD

HSS GROUND CUTTERS

The superior performance of FORD HSS Ground Cutters has been proven in on-the-job tests in countless applications, on ferrous or non-ferrous materials. If faster, better production at lower cost is your goal, get the facts on FORD.

FORD -- *the complete line!*

HSS ground cutters, rotary files, countersinks
CARBIDE cutters, end mills, grinding burs

Complete Details, Operating Data

All specifications plus informative operational data on more than 300 FORD rotary tools contained in new FORD Catalogue No. 207. Write for yours!

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.

Pioneers in rotary tools for more than 30 years

721 W. River St., Davenport, Iowa

▲ For more details circle **NED-108 F4** on enclosed inquiry slip ▲

If your cost of reclaiming materials is too high Spencer Vacuum can probably give you the answer. It not only picks up the valuable metals or dusts but conveys them to a closed container at any point in the plant. Gold, babbitt, enamel dusts, solder, welding flux (see illustration) and foundry sand are reclaimed by the ton every day. The same Spencer unit will clean your floors and do a dozen other disagreeable and expensive jobs. Ask for Bulletin No. 144.

with SPENCER VACUUM

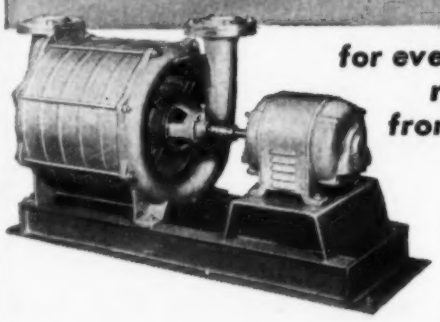
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD

466-N

▲ For more details circle NED-109 F4 on enclosed inquiry slip ▲

LAMSON BILLMYRE BLOWERS & EXHAUSTERS



for every pressure requirement from ½ to 7 lb. ...single or multi-stage design

Cast iron or fabricated steel, for air or gas—agitating, aerating, combustion, cooling, ventilating, gas and acid manufacture. Guaranteed consistently even pressure without contamination. Low maintenance cost, as shaft-impeller assembly is only moving part—eliminates constant checking.

Get *ALL* the facts...a complete information file—engineering laws, tables, features, applications, and lots more...all in Lamson Billmyre Blower and Exhauster Catalog B-6...*YOURS* for the asking!

LAMSON

LAMSON CORPORATION
2006 Lamson St., Syracuse 1, N. Y.

Plants at Syracuse and San Francisco

▲ For more details circle NED-110 F4 on enclosed inquiry slip ▲

Hardness Readings in 2 seconds!

Webster PORTABLE Hardness Testers FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

▲ For more details circle NED-111 F4 on enclosed inquiry slip ▲

CRANE HOIST CONTROL
one lever controls all hook motions

Precision handling of light or heavy overhead crane loads is possible with Selectodyne magnetic hoist control, which furnishes 11 speeds in both directions and is operated by single control lever. Unit is available in all capacities of Whiting overhead cranes and can be easily fitted to existing installations. Lever is moved forward and back to lower and raise the hook, and from left to right to control its speed. Control is equipped with an eddy current brake connected directly to hoist motor, and where required, can also be provided with an automatic load brake which provides complete safety even with loads over rated capacity or in event of electrical fault. Made by **Whiting Corp.**, S. Lathrop Ave., Harvey, Ill.

▲ For more details circle NED-112 F4 on enclosed inquiry slip ▲

STAINLESS STEEL SCREWS
types 18-8 and 430 available

Types 18-8 and 430 stainless steel screws have been added to wood screw line presently offered in steel, silicon bronze, brass, aluminum and all popular plated finishes. Screws are offered in Phillips and slotted styles, flat, round and oval heads and in all standard sizes. Made by **Southern Screw Co.**, Box 1360-Q, Statesville, N. C.

▲ For more details circle NED-113 F4 on enclosed inquiry slip ▲

WATER DEMINERALIZER
delivers water under pressure

Wall mounted, cartridge type demineralizer, designated the Pressure Bantam model BD-2, will deliver pure water in continuous flow under pressure at rates from 5 to 25 gph. Unit connects directly into any water line. It is a nonregenerative unit that employs replaceable resin cartridge. Only operating attention required is to change cartridge when Pura-Lite signal light goes out. Made by **Barnstead Still & Sterilizer Co.**, 103 Lanesville Terrace, Forest Hills, Boston 31, Mass.

▲ For more details circle NED-114 F4 on enclosed inquiry slip ▲

Now—Lock Your Feed Rates to Protect Machines . . . Reduce Costs with the CROSS Flow Control Lock!

Only authorized personnel carry a key for the Cross Flow Control Lock! They set machine feed rate, then lock it.

Easy to install. Just remove valve nameplate and adjusting lever, reinstall over lock mounting plate.

Available for Vickers ¼" flow control valves and remote control panels.

For full details, write Dept. A36.

- Eliminates Tampering
- Stops Costly Shutdowns
- Prevents Tool Abuse and Breakage
- Protects Machines Against Overloads
- Reduces Maintenance Costs

Established 1898
THE CROSS CO.
DETROIT 7, MICHIGAN

▲ For more details circle NED-115 F4 on enclosed inquiry slip ▲

.5418

PRECISION GEARS ON RELENTLESS PRODUCTION SCHEDULES

The feature of *independent* selection of speed, feed and indexing, which speeds machine set-up and provides a means for matching cutting speed and work feed to the material being machined, together with a "reserve of accuracy" built into the machine, has placed the Hamilton Precision Small Gear Hobber high in perfomance in the precision instrument field.

GET THE FACTS!
WRITE FOR FREE BULLETIN 5418
ADDRESS: THE HAMILTON TOOL COMPANY
901 HANOVER STREET, HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

▲ For more details circle NED-116 F4 on enclosed inquiry slip ▲

HOW WOULD YOU LIKE TO
SAVE 80%
ON ALL YOUR CARBIDE TOOL GRINDING?

MODEL 544 BELT MICRO FINISHING MACHINE

It's New! It's Different! It's Better!
Eliminates Diamond Wheel Grinding

1. Tools can be micro finished on every cutting surface including the top which prevents hollowing or rounding of any cutting edge.
2. Table—designed and built so that all edges, including hooked tool edges, may be finished. Table extensions combined with quick, angular table settings read directly on a protractor, make finishing all edges a simple operation.
3. Immediate and positive finishing belt adjustment.
4. Positive V-Belt control through Jack-Screw adjustment automatically provides correct drive belt tension at all times.
5. Belt and pulley guard rigidly attached to machine.
6. Sealed ball bearing construction, dynamically balanced pulleys, rigid cast machine base.

WRITE FOR FULL INFORMATION
LEMPCO PRODUCTS, INC.

LEMPCO Industrial Division Bedford, Ohio

▲ For more details circle NED-117 F4 on enclosed inquiry slip ▲

PICK 'EM UP
Faster..Easier

DOWNS SAFETY GRABS
...GRIP ANYTHING!

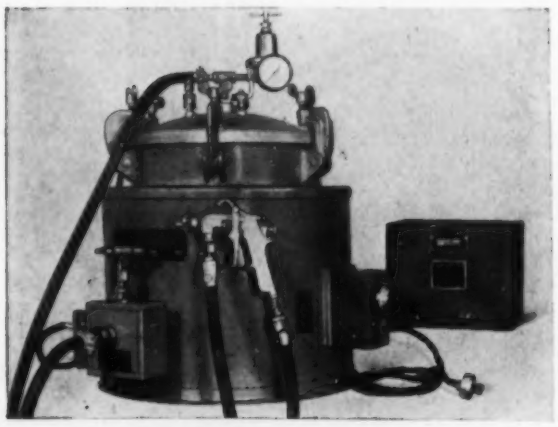
Yes we said anything—odd shapes, round, oblong, square or even loose objects such as bags or bundles. Best of all you save money on your handling problems while protecting employees.

Downs Safety Grabs are engineered to provide a load safety factor greater than rated capacity plus a Bulldog grip that won't let go until you release the load. There's a Downs hook, grip, tong or sling to fit every handling problem. Write for free illustrated catalog 200 today!

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

For more details circle NED-118 F4 on enclosed inquiry slip

SPRAY MELTED WAX with this STA-WARM equipment



Now you can successfully spray hot wax in a thin layer or coating over metal, wood, fibre or any surface to which wax normally adheres.

This is the new Sta-Warm development that has excited the interest of production and plant engineers. Its applications are numerous in a wide variety of industries.

Basic equipment, which can be tailored to your requirements, includes an electrically heated pressure tank of 2 to 100 gal. capacity for melting and storing, electrically heated flexible hose and gun assembly adapted to specific operations, plus power-pak with selective control of temperatures as required for heating the hose and spray gun.

If you are now dipping or pouring melted wax on your production line, you, too, may find that *spraying* provides material and operating economies worth investigating.

Inquire Today —outlining your current problem.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-119 F4 on enclosed inquiry slip

VARIABLE SPEED TRANSMISSION
1/6, ¼-hp sizes with worm reducer

Worm reducer assembly is available as standard equipment in Graham 1/6 and ¼-hp infinitely variable speed transmissions. Unit can be furnished with double output shaft extension as shown or with single shaft extension horizontal or vertical, up or down. Worm ratios of 5:1, 12:1, 23:1, 45:1 and 60:1 provide range of speeds from 550-0 to 10-0 rpm. Large ball bearings will take heavy thrust and overhung loads. Entire assembly of reducer, transmission and motor, is mounted with only four bolts. All speeds are selected by handwheel. Various types of built-in motors are available, as are various controls, including remote electrical, pneumatic and hydraulic. Made by **Graham Transmissions Inc.**, Dept. NED, Menomonee Falls, Wis.

For more details circle NED-120 F4 on enclosed inquiry slip

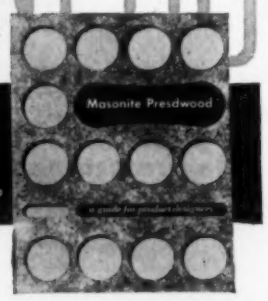
CONTOUR PROJECTOR
has 30-in. viewing screen and shadow and surface illumination

Choice of either shadow or surface illumination, ordinary room light operation, instant changes in magnification without refocusing and unvarying 8-in. distance between the lens and plane of object under observation are features of model 30 Kodak contour projector with 30-in. viewing screen. Usable in precision micrometry and on the production line, it has a staging area with a 17-in. throat and 8-in. horizontal and vertical table travel. Built-in helix table has worktable rotation of 15 degrees off center in either direction.

Horizontal and vertical micrometers are accurate to 0.00005-in. over their entire 1-in. length. Additional features are a direct reading screen for angular measurements which can be read from an engraved dial calibrated to 2 minutes of arc, a 1500-w light source for surface inspection and 500-w light source for shadow projection. Choice of six interchangeable lenses with 10, 20, 31¼, 50, 62½ and 100 X magnifications is offered. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-121 F4 on enclosed inquiry slip

DESIGNERS
new free booklet tells all about
MASONITE PRESDWOOD



Better products, better production! New booklet tells how to gain both—through versatile Masonite Presdwood®. Gives properties—tells how to use the 44 types and thicknesses of this strong, dense, all-wood hardboard. Send for your copy today!

NATURALLY STRONGER WITH LIGNIN
PRESDWOOD WOOD MADE BETTER
MASONITE® CORPORATION
Dept. NED-6, Box 777, Chicago 90, Ill.

"Masonite" signifies that Masonite Corporation is the source of the product

For more details circle NED-122 F4 on enclosed inquiry slip

They're Rugged!

Watson-Stillman Hand Pumps and Hydraulic Jacks

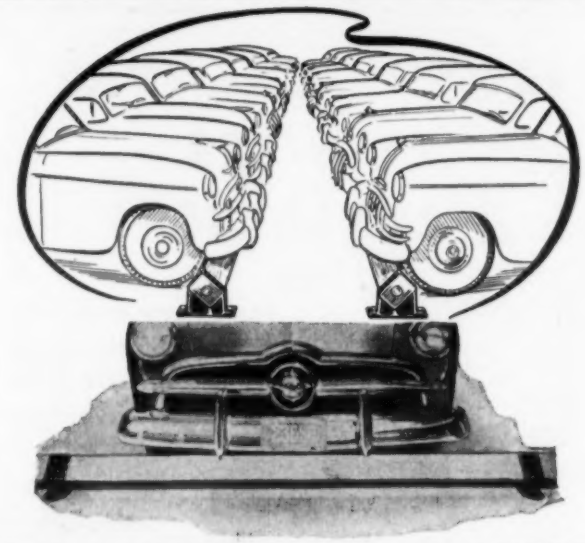
W-S Pumps are available with maximum pressure deliveries of 3,000 to 10,000 psi. Single and double plunger type . . . can be mounted on any size reservoir. Use with light oil, water with soluble oil or plain water. Excellent for operating hydraulic tools, jacks, presses and other hydraulic equipment . . . and for general hydrostatic testing.

W-S Hydraulic Jacks with independent pumps are used for many construction and maintenance jobs. Jack is connected to pump by flexible copper tubing . . . ideal for operation in inaccessible or dangerous locations. Capacities . . . 20 to 500 tons.

Write today for Bulletin A-5.

WATSON-STILLMAN FITTINGS DIVISION
H. K. PORTER COMPANY, INC.
1A Roselle, New Jersey

For more details circle NED-123 F4 on enclosed inquiry slip



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For more details circle NED-124 F4 on enclosed inquiry slip

thousands of users PROVE "HI-TEMP" C-5 THREAD COMPOUND IS BEST FOR ALL STUD THREADS and STAINLESS STEEL APPLICATIONS

✔ speeds up dis-assembly time
✔ prevents stud breakage
✔ eliminates pitting of stainless steel

NO MORE FROZEN OR GALLED STUDS . . . EVEN AT 1800°F

Let us SEND you a FREE SAMPLE so you can PROVE to YOURSELF that C-5 will lick your toughest stud breakage problems!

To assure easy maintenance on products having threaded assemblies many leading product engineers have specified the use of Fel-Pro C-5 as an anti-seize coating on stud threads prior to final production line assembly.

Fel-Pro's exclusive Colloidal-Copper formula allows for easy separation and reduces stud breakage of threaded assemblies after long exposures to extreme temperatures. It eliminates pitting of stainless and alloy steel even where dissimilar metals are joined.

Conduct your own tests with C-5 "Hi-Temp" at our expense. Write on your company letterhead for Free Sample and complete data sheet TODAY!

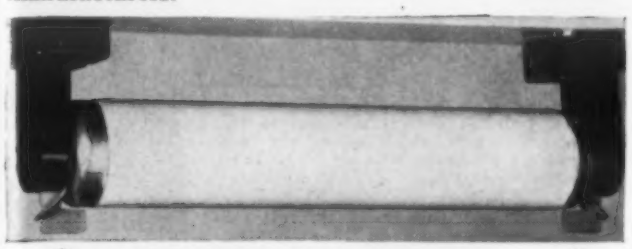
594

FELT PRODUCTS MFG. CO. 1510 Carroll Ave., Chicago 7, Ill

For more details circle NED-125 F4 on enclosed inquiry slip

FLUR-O-LOCKS for SAFETY ECONOMY EFFICIENCY

12 years old and still the only lock for fluorescent lamps. Recognized and used extensively by the leading lamp manufacturers.



FLUR-O-LOCKS

Guard against accidents from fluorescent lamps and at the same time increase lighting efficiency. Insurance Companies insist on this protection against personal injury and property damage.

Flur-o-locks are inexpensive and have proven performance over the years.

Millions now in use, conclusive proof.

Send for Catalogue

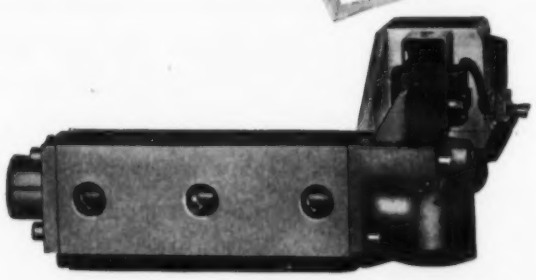
LADUBY COMPANY, INC.

Branford, Connecticut

For more details circle NED-126 F4 on enclosed inquiry slip

Quick-As-Wink
AIR AND HYDRAULIC
Control Valves

FEATURE THIS MONTH

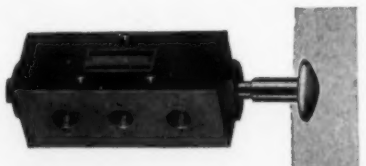


Single Plunger Solenoid Pilot Operated Valves

They'll give you millions of cycles of efficient trouble-free operation

● Quick-As-Wink Solenoid Valves are unsurpassed for positive, trouble-free dependable service . . . they give users millions of cycles of fast, high speed — and safe — operation. All parts are rugged. Low amperage requirement of the solenoid eliminates intermediate relays and simplifies electrical circuits. ⅜" to 2" sizes. 2-way, 3-way or 4-way actions. Bucking cylinder or double solenoid return. Send for the data sheets. Get full details about Quick-As-Wink, America's outstanding valve line, today.

also the following

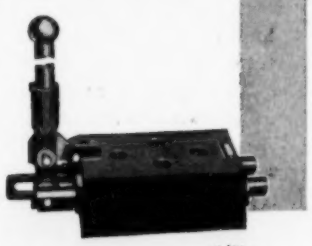


PUSH BUTTON OPERATED AIR VALVES

Push-pull or push and spring return operation — ⅛" and ¼" tapped connections. Widely used for controlling cylinders and many other applications. Air to 125 psi — vacuum—can also be used in low pressure hydraulic service.

LEVER OPERATED HYDRAULIC VALVES

Two position or three position valves ½" to 1½" sizes for line pressures 1000 to 5000 psi. Can be furnished in neutral, compound-exhaust or compound-on actions. Pilot cylinder operated types available up to 4".



For Fully Descriptive Data Sheets Write

C. B. HUNT & SON, Inc.

Hand, Foot, Lever, Cam, Pilot, Diaphragm and Solenoid Control Valves

2022 EAST PERSHING STREET • SALEM, OHIO

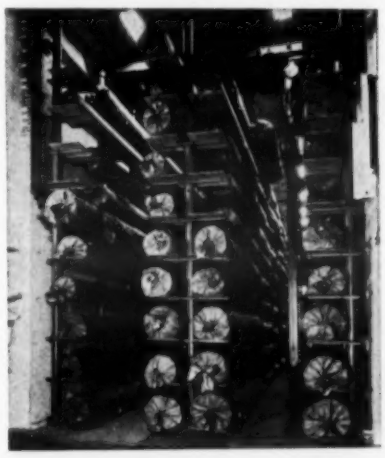
For more details circle NED-127 F4 on enclosed inquiry slip

STEAM GENERATOR
supplies 100 psi steam in 5 minutes

The Electro - Steam generator is capable of supplying 100 lb of live steam pressure at 320° F in 5 minutes. Suitable for use as a steam cleaner or steam source for other uses, it has only two moving parts, automatic safety controls and bears UL and ASME approval. Installation requires a 220-v outlet and a water connection. Valve adjustment delivers live steam, hot water, steam and detergent solution or cold water rinse as needed. Three immersed heating units are built into the 275-lb, 34 x 15¼ x 36-in. unit. Installation of the 2¼, 3½ and 5 hp unit can be either portable or permanent. Various accessories are available. Made by **Dryomatic Corp.**, Dept. ND, P. O. Box 334, Alexandria, Va.

For more details circle NED-128 F4 on enclosed inquiry slip

STORAGE RACK CRANE
with self-leveling device, operates on rails mounted on top of the racks



Latest development in the Trak-Rak crane is automatic self-leveling device which stops hoist at selected rack on perfectly even level to allow instant loading or unloading without further maneuvering. Installation is self-contained and crane operates on rails mounted on top of storage racks. It provides 100 per cent selectivity of storage materials from bins or racks and functions in extremely narrow aisle to serve both sides. In one paper company installation, crane stacks material 27 ft high, utilizing practically all of the cube within 28-ft 6-in. distance from floor to roof trusses.

With only 50-in. aisles, rolls up to 24-in. diameter with lengths of 9, 12 or 15 ft and weighing up to 1000 lb each are conveniently handled. The four basic motions include bridge, trolley travel, lifting and 360-degree rotation of hoisting column. Any or all motions can be manual or electric, and racks will store most any type of material. System is built by **Chicago Tramrail Corp.**, 4002 Washington Blvd., Chicago 24, Ill.

For more details circle NED-129 F4 on enclosed inquiry slip

AMERICAN AIRLINES uses the MULTISTAMP Stencil Duplicator for

LOT LABELLING AIR FREIGHT

Quick! Accurate! Easy! Print shipping information direct on cartons, boxes, packages. Eliminate double operation of preparing labels and then pasting them to the containers. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. New FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil. Then type or write in address or identification data . . . attach to duplicator . . . and print, like using a rubber stamp. Write for Literature and FREE SAMPLE FORM-CUT STENCIL AND PRINT.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Also for addressing shipping tags and labels . . . prints postcards, menus, forms, bulletins. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). At office or shipping room supply dealers.

OVER 30 YEARS **MULTISTAMP** STENCIL DUPLICATOR®

MANUFACTURED ONLY BY THE MULTISTAMP CO. NORFOLK, VIRGINIA

For more details circle NED-130 F4 on enclosed inquiry slip

THE HAMILTON
PORTELVATOR®
(Portable Elevating Table)

MAKES IT *Easy* TO LIFT • LOWER LEVEL • TRANSPORT LOADS UP TO 5,000 lbs.

3 TABLE SURFACES
Can be worked at from **ALL 4 SIDES**

Slow or fast lift.

Self locking at any height.

4 POINT SUPPORT
(table can't tip)

Lift mechanism can be operated from either end.

Turns easily on anti-friction casters. Positive floor lock.

WELDED CONSTRUCTION

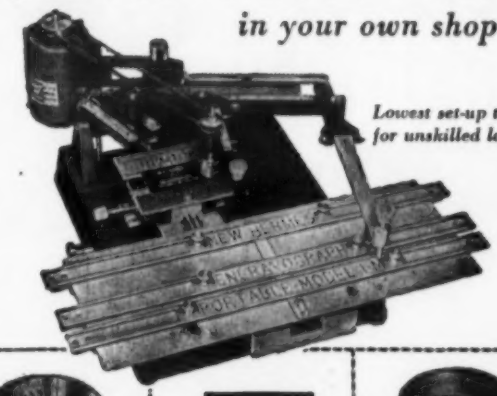
*THREE STANDARD MODELS TO CHOOSE FROM

FREE BULLETIN
Write The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio. Ask for Bulletin No. 5412.

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE

For more details circle NED-131 F4 on enclosed inquiry slip

ENGRAVE
NAME PLATES • PANELS • DIALS
in your own shop



Lowest set-up time for unskilled labor

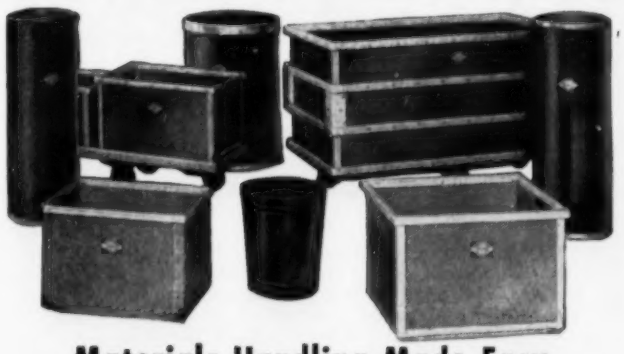
CALIBRATIONS | PROFILES | CURVED SURFACES

10,000 IN USE Accepted by all leading manufacturers as the speediest, most versatile portable engraver. Only the NEW HERMES has these patented features:

- Adjustable for 15 ratios.
- Self-centering holding vise.
- Automatic depth regulator.
- Adjustable copy holders.

Send direct to us for booklet IM 26

NEW HERMES ENGRAVING MACHINE CORP.
13-19 University Place • New York 3, N. Y.



Materials Handling Made Easy

Simplify the storage and handling of your materials with Spaulding Fibre Receptacles. They're tough, light weight, shock-proof, resistant to impact and abrasion, will not splinter or corrode.

The Spaulding line includes boxes, baskets, barrels, trays, and trucks of all types. Most can be made to your order in the size and weight best suited to your needs. Send coupon for catalog today.

Spaulding

SPAULDING FIBRE CO., INC., Dover, N. H.

Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

For more details circle NED-132 F4 on enclosed inquiry slip

Free

BROCHURE SHOWS HOW TO GET BETTER SCREW MACHINE WORK

IF YOU'RE having trouble in getting precision work on difficult or unusual screw machine operations, you'll find this new 12-page, illustrated brochure very informative.

It pictures various parts some of the country's largest manufacturers have had us produce for them. It deals with policies and prices—shows interesting plant operation scenes. It points the way to better screw machine operations.

Write Today on Your Stationery for Your Free Copy

AVALON MACHINE PRODUCTS, INC.
2535 EAST IMPERIAL HIGHWAY • LOS ANGELES 59, CALIF.

▲ For more details circle NED-133 F4 on enclosed inquiry slip ▲

THE NEW LEWIS "6" TODAY'S BEST BUY

IN PLASTICS INJECTION MOLDING MACHINES

The LEWIS "6" features high speed operation... maximum economy... greater capacity... positive safety. Designed for production molding of large projected area parts... this compact machine carries the work load of a considerably larger unit at a fraction of initial and normal operating costs.

Featuring the exclusive new "HYDRA-LOCK" clamp, the LEWIS "6" has the safest, most powerful hydraulic mold clamping device available today. "HYDRA-LOCK" develops a 200-ton clamping pressure in tenths of a second. In addition, this machine plasticizes up to 60 pounds per hour, and 7-ounce shots of polystyrene can be molded at the rate of 2-1/2 per minute.

For maximum efficiency and safety coupled with minimum maintenance... your best buy is a LEWIS "6" injection molding machine.

1007-LW

LEWIS

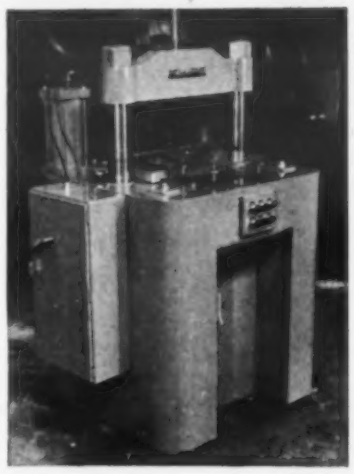
Write for Bulletin 102 for complete details

THE LEWIS WELDING & ENGINEERING CORPORATION

14 INTERSTATE STREET • BEDFORD, OHIO

▲ For more details circle NED-134 F4 on enclosed inquiry slip ▲

POWER PRESS BRAKE has 42-ton capacity at 100 psi



Stub type power press brake, designed for V-, U- and general forming where controlled pressure is required at point of operation, operates from shop air line and has 42 tons capacity at 100 psi. Machine is adaptable to most types of power brake press dies in short lengths up to and including 24 in. Work cycle is divided into low pressure advance to work and high pressure for forming period. Fully automatic cycling plus controlled retreat is possible. Length of stroke can be varied from 2 to 11 in., excluding die height. Unit can be applied to fabrication of wrap-arounds with sharp corners or any desired radius, together with standard power brake operations. Made by **Dayton Rogers Mfg. Co.,** 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-135 F4 on enclosed inquiry slip ▲

TUBE FABRICATING MACHINE straightens and cuts off 1/4 to 1-in. OD coiled tubing

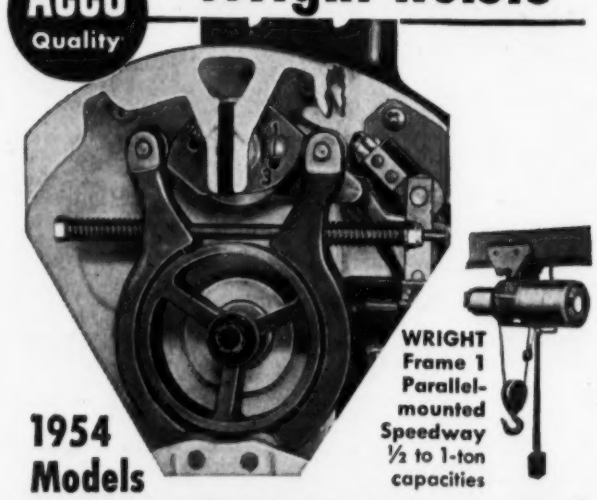
Coiled ferrous or nonferrous tubing from 1/4 to 1 in. OD can be straightened and cut off in any desired length up to 6 ft on this combination machine. Up to 24-in. diameter coils of tubing can be handled on machine which has hand-fed straightening rolls and manually controlled, hydraulically fed cutoff wheel. A 3½-gpm, 500-psi pump; ¾-hp motor; and 5-gal tank which provide hydraulic power for 2-in. diameter saw carriage feed cylinder are in recess at one end of base. The 3-hp, 1700-rpm motor which drives 10-in. diameter ball bearing-mounted saw through triple V-belt is recessed in other end of base.

Tension of steel straightening rolls is adjustable. Rolls are interchangeable and are supplied in specified sizes. A cutoff saw is provided for nonferrous tubing, while optional abrasive wheel can be used for ferrous tubing. Made by **Walter P. Hill, Inc.,** Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

▲ For more details circle NED-136 F4 on enclosed inquiry slip ▲

ACCO Quality

Wright Hoists



1954 Models SMASH MAINTENANCE COSTS!

...Nothing to adjust but the cam on the WRIGHT Hoist brake assembly pictured above. Brake springs and solenoid are factory-set... NEVER need adjustment for brake lining wear. For fast, easy servicing all parts are fully accessible. For full details on this WRIGHT Frame 1 Hoist, write our York, Pa., office.

ACCO

Wright Hoist Division
AMERICAN CHAIN & CABLE
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

for Better Values

▲ For more details circle NED-137 F4 on enclosed inquiry slip ▲

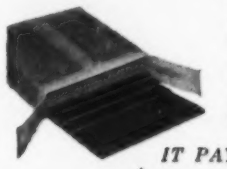
ISOMODE* PADS...

money-saving "shoes" for busy machine feet!

Now you can successfully isolate vibration, muffle plant noise, and cut down maintenance bills by using low-cost Isomode Pads.

Made of DuPont Neoprene, these pads resist oil and water, actually last for years. In thousands of installations, they have already proved their ability to swallow up troublesome machine shock and vibration. Even that of giant punch presses.

Installation is quick, easy. And there's no waste – you use only as much as you need. Simply cut an Isomode Pad to size and install under equipment. Results: Machines stay put without bolting, floors and building remain undamaged, working conditions are improved, and machine maintenance is cut.



Try a package of Isomode Pads and see. Write for full details and price list. **Trade Mark*

IT PAYS TO KEEP A PACKAGE ON HAND

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

▲ For more details circle NED-138 F4 on enclosed inquiry slip ▲

Stainless Fabrication:

UNIFORMITY OF WELD METAL REDUCES REJECTS

Reports from users indicate that Arcos Rods and Electrodes are lowering substantially the reject rate on many stainless welding jobs. An important factor in this time and money saving picture stems from Arcos quality controls in manufacture. The consistent uniformity of Arcos weld metal provides a sure stepping stone to improved welds. To get started, write today for "What Electrode Would You Use."

The ARCOS CORPORATION
1500 South 50th Street, Philadelphia 43, Pa.

▲ For more details circle NED-139 F4 on enclosed inquiry slip ▲

WANTED!

PUMPING JOBS NOBODY ELSE WANTS!

You can buy lots of good pumps, *but* NAGLE PUMPS are built to survive in those applications where ordinary pumps fail.

Modified type "SW-0" vertical shaft pump built by Nagle for severe service in an atomic energy plant.

If you must pump highly abrasive mixtures, corrosive liquids, hot solutions or heavy slurries, then you will save by using NAGLE CENTRIFUGAL PUMPS. Engineered to your specific requirements—The right design, the right materials of construction. Horizontal and vertical shaft types in complete range of sizes.

SEND FOR CATALOG 5206

NAGLE PUMPS

NAGLE PUMPS, INC.
1265 CENTER AVENUE, CHICAGO HEIGHTS, ILLINOIS

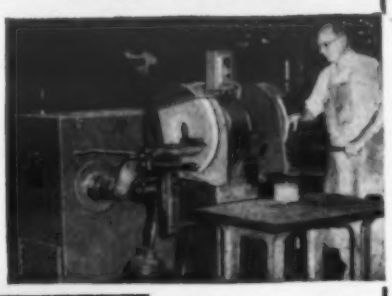
PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

▲ For more details circle NED-140 F4 on enclosed inquiry slip ▲

STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

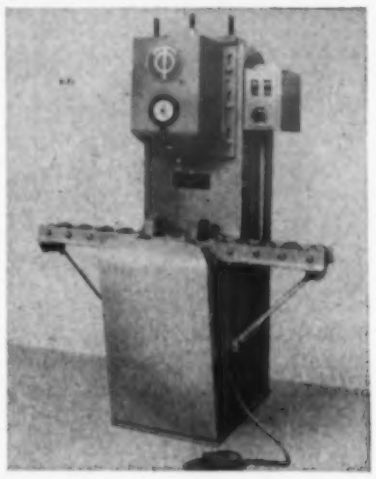
DUSTKOP

WRITE FOR
- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.
202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-141 F4 on enclosed inquiry slip ▲

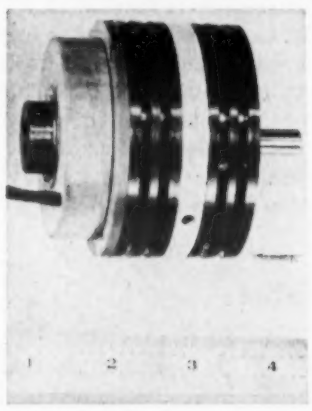
AUTOMATIC HARDNESS TESTER
tests 10 or more pieces per minute



Ten or more specimens per minute can be tested by this conveyorized automatic Brinell hardness tester designed for production line use. Built-in roller conveyor and air-operated lift feed each specimen to test position. Preset load from 500 to 4000 kilograms is then applied to piece automatically by steel ball and held for period set on electric timer. For production use, unit operates on "go—no go" principle while operator merely watches gage. Specimens falling within tolerance are returned to conveyor. Rejects can be removed quickly. Made by **Tinius Olsen Testing Machine Co.**, 1072 Easton Rd., Willow Grove, Pa.

▲ For more details circle NED-144 F4 on enclosed inquiry slip ▲

MAGNETIC FLUID CLUTCH
develops up to 50 lb-in. torque



Application of direct current to coil of model 731B magnetic fluid clutch produces torque up to 50 lb-in. It utilizes grease-like lubricant in which fine magnetic particles are suspended. Varying the current causes fluid to stiffen in proportion to the current. This produces torque much like the varied clutch pressure of a conventional clutch. Direct current may be derived from a vacuum tube or rectifier source. At the maximum recommended speed of 800 rpm, it can transmit up to 475 w or 2/3-hp. The ball bearing equipped unit weighs 3½ lb and measures 3¼ in. diameter by 3 49/64 in. long. Made by **Raymond Engineering Laboratory, Inc.**, Dept. M-1, Smith St., Middletown, Conn.

▲ For more details circle NED-145 F4 on enclosed inquiry slip ▲

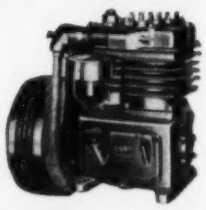
Self-Clinching Fasteners

Penn Engineering & Mfg. Co.—Self-clinching nuts for load-carrying threads in thin steel, brass, copper or aluminum sheets are covered in illustrated catalog CL-154. Installation procedures, design features and assembly cost savings are all dealt with.

▲ For more details circle NED-146 F4 on enclosed inquiry slip ▲

GET MORE PRODUCTION PER MAN HOUR
with the Help of Dependable Efficient
Curtis

Air Compressors

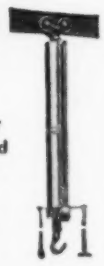


Available up to 320 cu. ft. Can be supplied base mounted up to 50 H.P. or tank mounted up to 15 H.P. Timken bearing equipped . . . precision built.

Air Cylinders and Hoists

To lift, lower, push, or pull

Pendant air hoist is ideal for lifting or lowering—Bracketed Air cylinder can be mounted in any position for lifting, lowering, pushing or pulling.



For more information write to:

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.
1979 Kienlen Avenue • St. Louis 20, Missouri 764

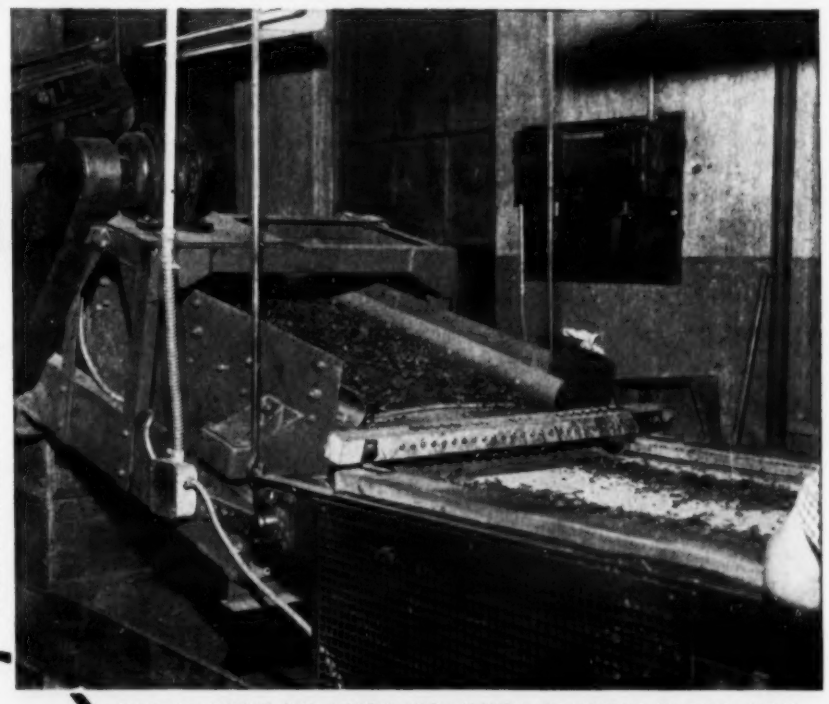
100 Years of Successful Manufacturing Experience

▲ For more details circle NED-142 F4 on enclosed inquiry slip ▲

Here's How The Makers Of
ADMIRATION CIGARS
Find Good Use For This
MIGHTY-MITE
VIBRATING SCREEN

Maintaining high standards for purity and uniformity in the making of famous Admiration Cigars is the constant goal of E. Regensburg & Sons, Allentown, Penna.

For instance, here you see the care given the preparation of short filler which is used in some sizes of Admiration Cigars. The tobacco is fed onto a single deck Mighty-Mite vibrating screen which quickly and efficiently removes tobacco dust and undersize particles before it reaches a conveyor belt for final hand cleaning. How valuable is the Mighty-Mite in this operation? Well, in the words of Edward B. Regensburg it easily handles 1,000 pounds in an eight hour day and during its two years of constant operation has required no maintenance.



Remember . . .
WHEN THE LOAD IS LIGHT SCREEN IT RIGHT WITH MIGHTY-MITE

MADE IN SINGLE AND DOUBLE DECK MODELS TO HANDLE UP TO 15 T.P.H.
SIZES 1½'x4' to 2'x8' • WIRE CLOTH OPENINGS TO MEET ANY REQUIREMENT

Get The Labor Saving Facts NOW! • Send For NEW Literature

SCREEN EQUIPMENT CO., INC. BUFFALO 25, N. Y.
One of America's Largest Makers of Vibrating Screens Exclusively

▲ For more details circle NED-143 F4 on enclosed inquiry slip ▲

5415

REMEMBER . . . THE WORD
Varimatic®

It's America's most outstanding super sensitive, small hole, precision drilling machine. And the difference in price between the Varimatic and the cheapest small hole drilling machine is reckoned in pennies per day. Consider that fact when you specify.

For prices and complete specifications

ASK FOR FREE BULLETIN 5415

ADDRESS: THE HAMILTON TOOL COMPANY
901 HANOVER STREET
HAMILTON, OHIO

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE

▲ For more details circle NED-147 F4 on enclosed inquiry slip ▲

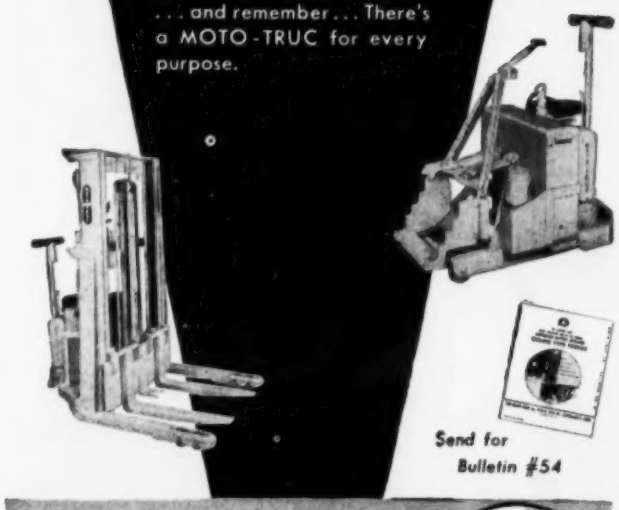
COMPARE MOTO-TRUC *for...*

★ MANEUVERABILITY
★ TRULY FUNCTIONAL DESIGN
★ EASE OF OPERATION
★ EASE OF MAINTENANCE
★ PRICE

Only through diligent comparison can your choice of materials handling trucks be a wise and economical one.

Design features that are *tomorrow's* standards are incorporated in MOTO-TRUCS . . . *today* . . . these features are often copied . . . yet never equalled.

Investigate the *complete* MOTO-TRUC line of Walkies . . . and remember . . . There's a MOTO-TRUC for every purpose.



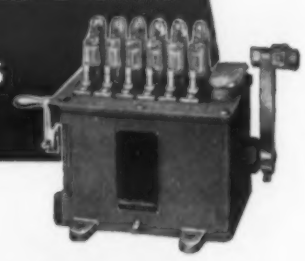
Send for Bulletin #54

Representatives in Principal Cities
The MOTO-TRUC *Co*
MOTO-TRUC Designers for the Industry PATENTED
1961 E. 59th STREET • CLEVELAND 3, OHIO
PALLET . . . PLATFORM . . . HI-LIFT TRUCKS
LARGEST EXCLUSIVE MANUFACTURERS OF "WALKIES"

▲ For more details circle NED-148 F4 on enclosed inquiry slip ▲

For Positive Automatic Machine Lubrication use

HILLS-McCANNA FORCE FEED LUBRICATORS



● Hills-McCanna Force Feed Lubricators are specially designed oil line pumps that provide a positive automatic flow of oil to even the most difficult-to-lubricate spots. Available in open or enclosed types in sizes from 2 to 32 pints with 1 to 48 feeds. Oil flow through the lubricator is exactly controllable to meet your specifications. For complete information, write for catalog L-52. Hills-McCanna Co.— 2455 W. Nelson St., Chicago 18, Ill.

HILLS-McCANNA
force feed lubricators

Also manufacturers of Saunders patent valves • chemical proportioning pumps • magnesium alloy sand castings.

▲ For more details circle NED-151 F4 on enclosed inquiry slip ▲

for CHEMICALLY RESISTANT JARS, POTS CROCKS, TANKS

Insist On U. S. CHEMICAL PORCELAIN

Jars, pots, tanks, etc. made from "U.S." Chemical Porcelain are leak-proof, mechanically strong, dense and of virtual *zero* porosity. They are completely inert to all chemicals except hydrofluoric acid and hot caustics. And porcelain contains *no iron* to be absorbed — no induced contamination! Its non-aging characteristics make for long, maintenance-free service life. No-seam construction, rounded corners and smooth lustrous white glazed surfaces provide for quick, easy cleaning.

Our complete Chemical Porcelain line of jars, pots and tanks includes a wide variety of stock items in capacities ranging from 2½ to 200 gals.

WRITE TODAY — *ask for* BULLETIN 410

U.S. STONEWARE *Process Equipment Div.*
Akron 9, Ohio 241-D

▲ For more details circle NED-152 F4 on enclosed inquiry slip ▲

NEW 1954 MODELS

LIGHT AS YOU WANT IT for Machine Tools, Assembly and Inspection Benches

FOSTORIA LOCALITES

FINEST OF ALL LOCAL LIGHTING

MODEL 2-MH-700 Overall length 35" $7.04 Each in std. pkg. of 8 Less $8.80 ea.

Directs Light Exactly as Needed

Reflector—5" long x 3⅞" wide x 3" deep. Rotates 360°. Accommodates 100 watt A-21 or 60 watt A-19 lamp.

Arm Joints—New patented tension disc design. Easy, smooth action with only one hand. Available with 1, 2 or 3 arms.

Base—Universal for vertical or horizontal mounting. Also adaptable to outlet boxes. Collet revolves 360°.

Wiring — McGill industrial socket 4101-FL with Levolier switch. 8 ft. POT-32 18-2 heavily insulated oil resistant wiring with molded plug.

Finish—Gray baked enamel. Reflector interior, high temperature White.

WRITE for complete catalog of Localite models for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION
Fostoria, Ohio
Localites available through wholesalers everywhere

LOCALITE fostoria for Light ON the Job

▲ For more details circle NED-153 F4 on enclosed inquiry slip ▲

SAND BLAST GUN
is portable all-purpose unit

Designed to handle all types of abrasives from steel shot to nut shells, Sandstorm portable sand blast gun will operate successfully on air line pressures ranging from 60 to 150 psi. Gun is complete with bottom-mounted can for the abrasive material and has a built-in blast regulator which will reduce force for delicate work. Its performance is comparable to that of commercial machines except that the blast covers a smaller area, and it can be used for many jobs from rust removal to etching. Made by **Lindberg Products Co.**, P. O. Box 885-D, Los Gatos, Calif.

▲ For more details circle NED-154 F4 on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE
made in ¾ and 1½-hp sizes

Speed is varied by changing the location of the countershaft between two fixed sheaves in this variable speed drive. The spring loaded belt face maintains correct belt tension in all speed positions and full load carrying capacity is assured throughout the full speed range of 9 to 1. Unit uses standard V-belts in both the 4-in. ¾-hp and the 6-in. 1½-hp sizes. Hand control is located away from belts and moving parts for safety. Made by **Speed Selector Inc.**, 118-U Noble Ct., Cleveland 13, O.

▲ For more details circle NED-155 F4 on enclosed inquiry slip ▲

TAP & DIE HOLDER
for use on any lathe

High speed tap and die production is possible on any lathe with the Cobb quick-stop reversible holder. It is inserted in the tailstock of any lathe and is brought to an instant stop by the operator releasing his hold on the tool until the lathe is stopped. Tool consists of No. 30 Jacobs chuck and arbor, 0 to 5/16-in. and special ¼-in. shaft for mounting in the lathe tailstock. One end of the holder takes a 13/16-in. OD button die and the chuck and arbor can be replaced with a 1-in. OD button die on the other end. Only when the operator grips the shank or holder does the tap and die operate. Made by **Cobb Precision Co.**, Dept. NED, 1042 N. Cole Ave., Hollywood 38, Calif.

▲ For more details circle NED-156 F4 on enclosed inquiry slip ▲

OPW AUTOMATIC SHUT-OFF NOZZLES

MORE THAN 100,000 OWNERS AND USERS PROVE THESE FACTS:

- POSITIVE SHUT OFF
- NO OVERFLOW AT TOP DISCHARGE
- ELIMINATES FIRE HAZARDS AND PRODUCT LOSS
- LIGHTER BECAUSE OF ALUMINUM CONSTRUCTION
- CAN BE USED BY ANY INEXPERIENCED OPERATOR
- MINIMUM MAINTENANCE
- LEAKPROOF
- DURABLE

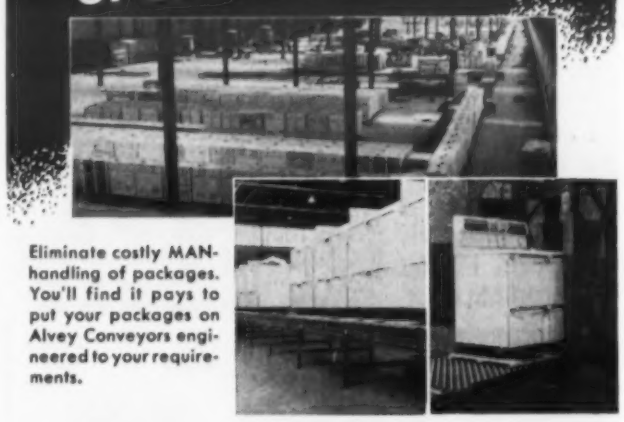
No. 1190 No. 1811

OPW CORPORATION
2729 Colerain Ave. Cincinnati 25, Ohio

▲ For more details circle NED-157 F4 on enclosed inquiry slip ▲

ALVEY engineered CONVEYORS

SPEED PACKING



Eliminate costly MAN-handling of packages. You'll find it pays to put your packages on Alvey Conveyors engineered to your requirements.

In the shipping department, electric ranges are dressed for travel — moving smoothly and surely on Alvey Conveyors. Thanks to creative conveyor engineering, stove transportation is job-timed . . . work-flow is uninterrupted.

An Alvey Engineer is ready to visit your plant . . . to explain the advantages of an engineered conveyor system in your production operations.

ALV-149A

ALVEY CONVEYOR MANUFACTURING CO.
9259 Olive St. Rd., St. Louis 24, Mo.

BRANCH OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-158 F4 on enclosed inquiry slip ▲

- *for low-cost speed reduction*
- *for high-efficiency drives, even at high ratios*
- *for quiet, non-slip drives*
- *for high-speed drives*
- *for low-maintenance drives*

GET THE ORIGINAL

Gilmer "TIMING" BELT STOCK DRIVES
from your NYB&P Distributor

WHETHER you want to step down the output of a high-speed motor . . . assure a fixed speed ratio between two or more shafts . . . or simply obtain a quiet, flexible, positive drive that needs no lubrication, your best bet is a Gilmer "Timing" Belt *stock drive!*

Here are some reasons why more than a million of these revolutionary toothed-belt drives are now in use:

CAN'T SLIP—Positive engagement of the "Timing" Belt's teeth with axially-cut pulley grooves assures no slippage, no creep, no power loss, precision control of speed ratio.

STRONG, LIGHT, FLEXIBLE—A single layer of continuously-wound, neoprene-encased, steel cable of high tensile strength gives the "Timing" Belt highest strength-to-weight ratio, with extreme flexibility. No stretch; no take-up. Range: to 50 hp from stock.

NO INITIAL TENSION—Teeth, not friction, provide the grip . . . reducing bearing loads and eliminating need for out-board bearings.

NO LUBRICATION—Absence of metal-to-metal contact eliminates need for lubricants, lubricating devices and housings. High speeds cause no lubricating problems.

ULTRA COMPACT—Very small pulleys can be used without slippage, permitting very short centers and high ratios.

SPEED RANGE—Operates without slippage at speeds of inches per day to 15,000 fpm. Mechanical efficiency is very close to 100%.

Ask your local NYB&P Distributor for a copy of the Gilmer "Timing" Belt STANDARD DRIVE MANUAL or use the request form to obtain a copy of the Manual and location of nearest stock-carrying distributor.

NYB&P NEW YORK BELTING & PACKING CO. 1 Market St., Passaic, N. J.
America's Oldest Manufacturer of Industrial Rubber Products

▲ For more details circle NED-159 F4 on enclosed inquiry slip ▲

SOMETHING NEW IN HYDRAULICS

DENISON low-priced 2000 psi Series M Relief Valves

NOW . . . a wider range of pressure regulation than found in any other relief valve used in 2000 psi circuits today.

GET FACTS. New Free Bulletin No. 152 gives operating characteristics, capacities, sizes and dimensions for new line of Denison Series M Relief Valves. Write for it today.

THE DENISON ENGINEERING COMPANY
1151 DUBLIN ROAD • COLUMBUS 16, OHIO
LEADING DESIGNER AND MANUFACTURER OF HYDRAULIC PRESSES AND COMPONENTS
▲ For more details circle NED-160 F4 on enclosed inquiry slip ▲

PAGE FENCE -Since 1883

• AMERICA'S FIRST WIRE FENCE •

• Page Chain Link Fence, pioneered by Page and made only by Page, is quality controlled from raw metal to erected fence. Whether you choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum, you'll have a rugged fence on sturdy metal posts deep-set in concrete. Choose any one of 8 basic styles, varied by heights, types of gates, posts, top rails and barbed wire strands for extra protection. And to be sure of reliable workmanship your fence will be expertly erected by a specially trained firm. For helpful Page data and name of member nearest you—

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.
▲ For more details circle NED-161 F4 on enclosed inquiry slip ▲

Colonial Develops SPECIAL RUBBERS

FOR *Tough* INDUSTRIAL APPLICATIONS

CONSULT OUR ENGINEERS ON YOUR RUBBER PARTS PROBLEMS AT NO OBLIGATION

The Colonial Rubber Company has the experience, the technical staff, and the facilities to meet your *special* requirements in industrial rubber parts. Our service is fast, efficient and precise for three important reasons:

Colonial Operates Its Own
- **RUBBER RESEARCH LABORATORIES**
- **DIE-MAKING MACHINE SHOP**
- **PARTS PRODUCTION PLANT**

Send for Free Illustrated Booklet
Contains complete details on Colonial's custom rubber compounding and molding . . . shows *why* manufacturers can use this service to advantage. 2300

Colonial Rubber Co.
Ravenna, Ohio

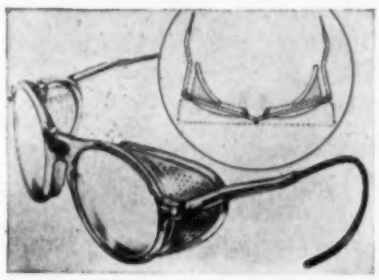
▲ For more details circle NED-162 F4 on enclosed inquiry slip ▲

SAFETY HOOK with spring tensioned latch

Safety for both men and equipment can be realized during lifting operations through use of this safety hook, optional for use on all Coffing hoists. Once the hook is engaged, a stamped steel latch swings down and is held in place by a lock that is under spring tension. Slight pressure on the release unlocks the latch, designed to allow unobstructed use of the hook's throat opening. Drop forged, heat treated alloy steel hook is cadmium plated. Made by **Coffing Hoist Co.**, 801 Walter St., Danville, Ill.

▲ For more details circle NED-163 F4 on enclosed inquiry slip ▲

SAFETY SPECTACLES one size fits any face



Hinged bridge design of the Contour-Spec safety goggle permits one size to fit any face comfortably. Seven-barrel hinge is fabricated from corrosion-resistant nickel-silver and adjusts to any width from 18 to 26 mm. Plastic strips for attaching side shields are molded as an integral part of the frame. Side shields are available with or without perforations. Various shades of lenses are available. Spectacles can readily be used under a respirator. Made by **Willson Products, Inc.**, 207 Thron St., Reading, Pa.

▲ For more details circle NED-164 F4 on enclosed inquiry slip ▲

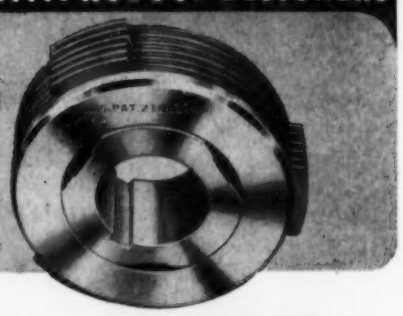
ELECTRIC HAND DRYER for recessed installations

Model C electric hand dryer projects only 3¾ in. from the wall, permitting recessed installation in washrooms. It is installed in a steel box that is set into the wall during construction. Featured are a permanent air filter that can be brushed without removing, a touch-action starter bar, vandalproof construction and revolving air jet baffle for face and forearm drying. Made by **Electric-Aire Engineering Corp.**, Dept. NED, 209 W. Jackson Blvd., Chicago 6, Ill.

▲ For more details circle NED-165 F4 on enclosed inquiry slip ▲

New FOR MACHINE . . . PRODUCT DESIGNERS

BUILD YOUR OWN CLUTCH WITH THE



MAXITORQ "DISC-PAC"

Due to a growing demand for Maxitorq Floating Discs, we now introduce the Maxitorq Disc-Pac . . . a self-contained unit independent of the actuator. Patented Maxitorq Separator Springs prevent heating in neutral . . . Locking Plate locks all discs onto body.

Thus you may build your own clutch (or brake) from our stock parts. Disc-Pac keys to shaft . . . easily replaced. Available in 8 diameters, 2" to 8", ¼ to 15 h.p. Disc-Pac fits Maxitorq Driving Rings, if you wish to use them. Write Dept. NE-6 for full specifications and prices.

THE CARLYLE JOHNSON MACHINE COMPANY
2CJ54 MANCHESTER, CONNECTICUT

▲ For more details circle NED-166 F4 on enclosed inquiry slip ▲

★ in wires—cables—bus bars—fuses

measure current quickly

Both AC and DC

COLUMBIA

TONG TEST

- Only Tong Test can measure both AC and DC by snapping tongs around electrical conductor. Readings are taken instantly and accurately without breaking circuit or insulation.
- Interchangeable scale ranges up to 1000 amperes AC or DC.

AMMETER

- Safe, convenient, light weight. Cannot burn out as there are no windings.
- Voltage readings up to 600 volts AC or DC with the Voltor attachment.
- Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½".

Write for Tong Test Bulletin ND-400
COLUMBIA ELECTRIC MFG. CO. 4525 HAMILTON AVE. CLEVELAND 14, OHIO

▲ For more details circle NED-167 F4 on enclosed inquiry slip ▲

FIRST 2,000 LB. GAS TRUCK WITH YALE FLUID COUPLING

In this capacity and overall length

Cost-cutting features no other 2,000, 3,000, 4,000 lb. Truck can match

EXCLUSIVE FLUID COUPLING provides cushioned drive to safeguard Truck and load.

GREATER VISIBILITY. Low cowl for excellent visibility, greater stacking accuracy, safer operation.

OPERATOR EFFICIENCY. Controls positioned for maximum efficiency and comfort.

PNEUMATIC OR SOLID TIRES available on all models.

MAXIMUM FREE LIFT with Simplex or Duplex lifting cylinder.

EASIER MAINTENANCE. One-piece, removable engine hood for easy access to entire engine.

MAIL COUPON for complete information on this new truck.

YALE*

INDUSTRIAL LIFT TRUCKS AND HOISTS

*Reg. U.S. Pat. Off.

MAIL THIS COUPON TODAY

The YALE & TOWNE Mfg. Co., Dept. 376
11000 Roosevelt Blvd., Philadelphia 15, Pa.
I would like to have additional facts about
☐ Yale Trucks. ☐ Yale Hoists.

Company_____
Name_____ Title_____
Street_____ City_____ State_____
In Canada write: The Yale & Towne Mfg. Company St. Catharines, Ontario, Canada

Gas, Electric, Diesel & LP-Gas Industrial Trucks
Worksavers • Hand Trucks • Hand & Electric Hoists • Pul-Lifts

▲ For more details circle NED-168 F4 on enclosed inquiry slip ▲

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS 'BOLTS IN CONCRETE WITHIN

30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

For more details circle NED-169 F4 on enclosed inquiry slip

COOLS as it cleans COOLANTS

for longer tool life and reduced down-time

HOFFMAN VACU-MATIC FILTER

for automatic *continuous* filtering of water soluble coolants for individual grinders, hones, and other machine tools. 20 and 40 g.p.m. sizes.

Four times faster than systems which employ gravity alone, the new Hoffman "Vacu-matic" Filter is doubly effective in cutting down-time. The same powerful vacuum which achieves high flow rates for maximum coolant cleaning also keeps coolant at or below room temperature to prolong tool life and maintain tolerances.

here's how it cleans

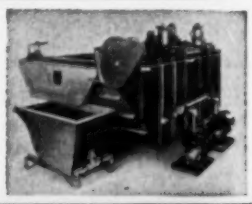
Coolant is drawn by continuous suction through the endless filter belt into a clean coolant chamber for recirculation to the machine. Solid particles are left on the moving belt which drops them as dry sludge into a tote box for easy removal.

here's how it cools

The powerful vacuum of the "Vacu-matic" creates an air flow which greatly reduces coolant temperature (and also inhibits bacteria). On applications where a temperature rise of 5° to 25° F. would ordinarily occur, the Hoffman "Vacu-matic" Filter maintains coolant at or below room temperature.

Write for Bulletin A-915.

For Groups of Machines
HOFFMAN flotation systems
20 to 1,000 g.p.m.
Fully Automatic
Write for Bulletin A-690.



Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

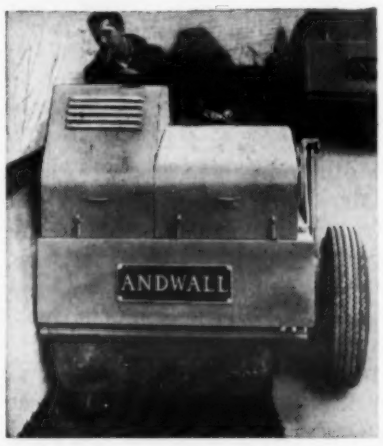
For more details circle NED-170 F4 on enclosed inquiry slip

AIR CONTROL VALVE is solenoid-operated pilot type

Designed for use in the 35 to 200 psi range for air and low pressure hydraulics, Speed King solenoid pilot-operated control valve is available in any voltage and cycle requirements. Totally enclosed valve meets JIC standards and has electrical junction box cast integral with pilot control housing. Pilot can be mounted in two positions over the base and is universal to all assemblies. All parts are noncorrosive, base being cast bronze and the pilot valve a zinc base alloy casting. Two, three, four and four-way five-port (two pressure) models with pipe sizes from ¼ through 1 in. are offered. Foot or manifold mounting is optional in all models except the two-pressure type. Made by **Valvair Corp.** 947 Beardsley Ave., Akron 11, O.

For more details circle NED-171 F4 on enclosed inquiry slip

PORTABLE ROLLER can be towed behind truck



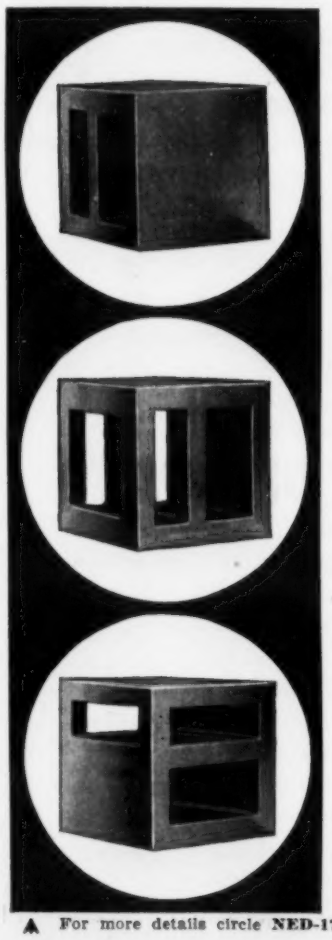
Tandem 2-ton roller is designed to permit surfacing to within 1¼ in. of curbs, walls or other vertical obstructions. Suitable for patch work where ease of maneuverability and close work are important, roller concentrates its weight on the main roller and provides a compaction pressure of 110 lb per lineal inch. Water drum capacity is 800 lb and its tank holds 220 lb. Wheels with pneumatic tires support the roller for trailing behind any truck at any speed after its 36-in., 4100-lb roller is raised off the ground by an integral hydraulic lift. Power is furnished by a Wisconsin two-cylinder air-cooled engine of 11.2 hp. Made by **Andwall Mfg. Co.,** Dept. NED, Oconomowoc, Wis.

For more details circle NED-172 F4 on enclosed inquiry slip

Precision Servo Motors

G-M Laboratories Inc.—Sizes of servo motors listed in 4-page catalog No. 4 range from 0.980 to 1.70 in. diameter and are for use on 60 and 400 cycles at voltages from 26 to 115. Applications range from gun sights and guided missiles through altimeters, direction finders and servo circuits in general.

For more details circle NED-173 F4 on enclosed inquiry slip



3 IN 1

COMBINATION TOOL

CHALLENGE UNIVERSAL BOX ANGLE

This new versatile tool has the clamping facilities of an *angle iron* . . . the stability, balance and accuracy of a box *parallel* . . . the perpendicular flat surface of an angle plate. Made of high grade special analysis semi-steel, heat treated and precision ground. Furnished in two sizes — 6x6x6 and 8x8x8 inches. Other sizes can be made to order.

747

Challenge TRADE-MARK ®

THE CHALLENGE MACHINERY COMPANY
Office, Factories and Show Rooms Grand Haven, Mich.

For more details circle NED-174 F4 on enclosed inquiry slip

for original equipment vacuum pumps call on GAST

Motor-Pump Model 0406—To .6 CFM, 25" vac. Wt. 16 lbs., 10¼" long.

V-belt Model 1550-V2—To 10 CFM, 15" vac. For paper feeding, etc.

Heavy-duty, fan-cooled Model 1065-V4-34. To 28" vac. with ½ HP.

Heavy-duty, fan-cooled V-belt Model 2565-V12A. To 21 CFM, 28" vac.

Some accessories standard.

YOU GET HIGH QUALITY that solves product problems with long-lived high performance . . . a result of dependable rotary-vane design plus rigid quality control.

A WIDE CHOICE OF SIZES from five basic types to 24 CFM or 28" vacuum. Some models oil-less construction. Our volume sales cut your costs!

YOU GET FULL COOPERATION from Gast engineers backed by over 25 years' experience building vacuum pumps for original equipment. For willing cooperation, *call on Gast!*

Write GAST— describing your specific application. Request Catalog and "Ideas" Booklet.

see our catalog in PRODUCT DESIGN FILE or write for copy

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY AIR MOTORS • COMPRESSORS • VACUUM PUMPS
(TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-175 F4 on enclosed inquiry slip

FREE DATA ON MODERN THERMOSTATS

New reliability, flexibility and sensitivity in multi-purpose units

Learn about a thermostat that is sensitive *on the outside*. One where the shell itself activates the electrical contacts for the control of temperature, humidity, vapor level, radiant heat and other variables where temperature is a factor. The Fenwal THERMOSWITCH® control has a single-metal shell which expands or contracts *instantly* with temperature changes. Its efficiency is high, cost low. Fenwal THERMOSWITCH controls are now being used throughout industry to control temperature of gases, solids or liquids.

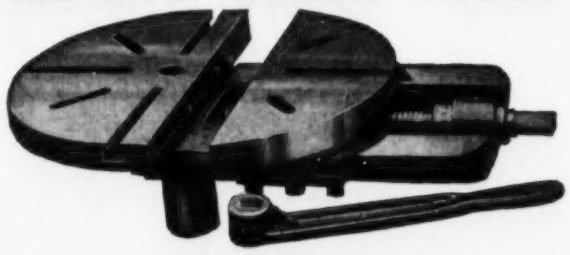
It costs you nothing to have the complete data on file. Also, Fenwal engineers are glad to cooperate with your engineering staff on special or new temperature control projects. **Write for Catalog 400, Fenwal Incorporated, 86 Pleasant St., Ashland, Massachusetts.**

Fenwal **THERMOSWITCH®**
Electric Temperature Control and Detection Devices
SENSITIVE...*but only to heat*

For more details circle NED-176 F4 on enclosed inquiry slip

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

In 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

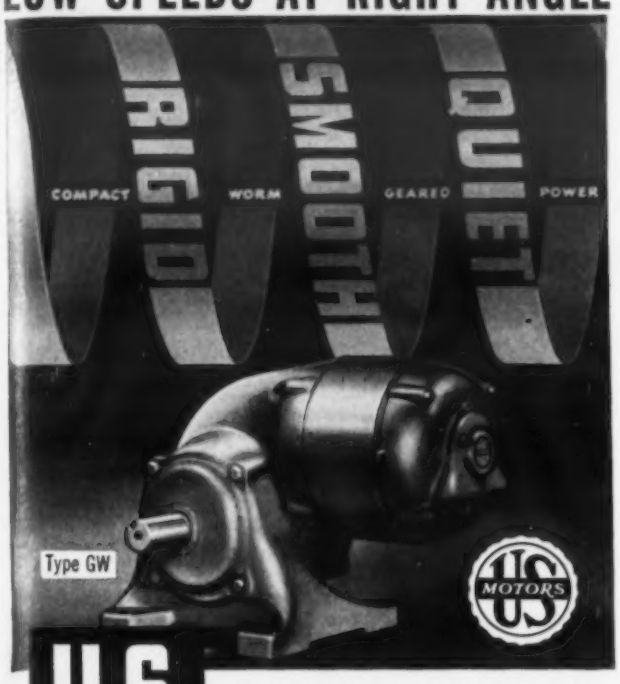
WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete

MODERN MACHINE TOOL CO.
Jackson, Michigan

For more details circle NED-177 F4 on enclosed inquiry slip

LOW SPEEDS AT RIGHT ANGLE



U.S. SYNCROGEAR MOTOR

20 to 155 RPM—¼ to 3 HP *Request Bulletin*

U.S. ELECTRICAL MOTORS Inc.

BOX 2058, LOS ANGELES 54, CALIFORNIA MILFORD, CONN.

▲ For more details circle **NED-178 F4** on enclosed inquiry slip ▲

Brand Spanking New!

MEYCO CONTROLLED CUT CARBIDE TIPPED SAFETY SAW

★ The latest addition to the famous MEYCO line of precision cutting tools. This new controlled cut, carbide tipped safety saw has many advantages: It's SAFE: will not pull hand into the blade, will not grab and kick-back work. It's ECONOMICAL: costs less to buy, longer life between grinds; cuts smoother, longer. Its CONTROLLED CUT regulates rate of feed, assures clean cut; makes chips instead of saw dust. Available at leading mill supply and hardware houses, or direct from factory. Write for fully descriptive literature and price list. Ask for Catalog No. 19.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-179 F4** on enclosed inquiry slip ▲

Dress up your product **Assure tight assemblies**

—and get

BIG SAVINGS *with*

PALNUT Trademark ACORN LOCK NUTS

- Cost much less than ordinary acorn or cap nuts.
- Spring steel locking action holds tight under vibration.
- Pleasing appearance—covers rough bolt ends.
- Protects users against scratches and catching.

SAVE MONEY and get a secure, streamlined fastening on light assemblies, by using low-cost PALNUT Acorn Lock Nuts. Double-locking spring action resists severest vibration. Easily, speedily applied with hand or power tools. Also used on top of ordinary nuts to cover bolt ends and lock heavy assemblies.

Full range of popular thread sizes, in cadmium, nickel, chrome or other finishes to order.

Send for literature and free samples, stating size and finish.

The Palnut Co., 45 Cordier St., Irvington 11, N. J.

In Canada: P. L. Robertson Mfg. Co., Ltd., Milton, Ontario

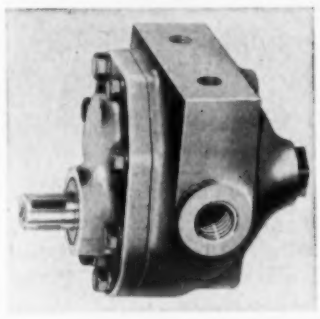
▲ For more details circle **NED-180 F4** on enclosed inquiry slip ▲

PLASTIC VALVES of polyvinyl chloride

Stems of molded globe type polyvinyl chloride valves can be repacked with Teflon packing under full line pressure. No packing of any type is needed at the valve seat and the disk is easily replaceable. The 1-in. valve has been tested at 1500 psi and operates at a working pressure of 150 psi at room temperature. Noncorrosive and suitable for temperatures not exceeding 160° F, valves are made to fit ½, 1 and 1½-in. pipe sizes with full flow characteristics. Made by **Stokes Molded Products,** Webster at Taylor Sts., Trenton 4, N. J.

▲ For more details circle **NED-181 F4** on enclosed inquiry slip ▲

HYDRAULIC GEAR PUMP designed for pressures to 2000 psi



High-pressure model 051002-110 hydraulic gear pump will produce pressures up to 2000 psi. Compact unit has a capacity of 11 gpm at 2400 rpm with volumetric efficiency up to 94 per cent and mechanical efficiency up to 88 per cent. It is recommended for intermittent or continuous duty with oil temperatures up to 150° F. Made by **Borg-Warner Corp.,** Pesco Products Div., Dept. 61, 24700 N. Miles Rd., Bedford, O.

▲ For more details circle **NED-182 F4** on enclosed inquiry slip ▲

WHEATSTONE BRIDGE features single-knob measuring

Six resistance ranges from 40 milliohms to 50,000 ohms are covered by type ZK Wheatstone bridge, operated by a standard 4.5-v dry cell battery. Only one knob has to be turned, clockwise to increase resistance, counterclockwise to decrease resistance. Various ranges click in automatically. Accuracy is ±1 per cent, except lowest range where accuracy is ±5 milliohms. Made by **Herman H. Sticht Co.,** Dept. ED, 27 Park Pl., New York 7, N. Y.

▲ For more details circle **NED-183 F4** on enclosed inquiry slip ▲

C-D-F MAKES IT...

The Grommet that Springs out and **HOLDS TIGHT!**

- The aircraft industry needs thousands of grommets for wires and cables passed through bulkheads. C-D-F offers this unique answer:

Fine weave canvas C-D-F Dilecto rolled tubing is cut into rings. Each ring is grooved and beveled on its outer diameter, then slit diagonally.

Result: Plastic grommets that are easily compressed and inserted by hand. The built-in tension of the tough Dilecto ring makes it spring outward, tight against the edge of the hole . . . cushioning...insulating...saving assembly time!

DILECTO is mechanically and dielectrically strong. Resistant to high heat, hot oil, excessive humidity. C-D-F sells it in sheets, tubes, rods in a wide range of grades . . . also handles complete fabrication on high speed machines. Write now for sample grommet and Dilecto catalog!

Continental-Diamond Fibre Company

NEWARK 30, DELAWARE

▲ For more details circle **NED-184 F4** on enclosed inquiry slip ▲

for 7/16" and 9/16" nutsetting

Buckeye portable air-powered wrenches make nutsetting easier—on the product, on the operator and on the tool!

Torque can be predetermined within motor capacity by simply regulating the air pressure—no more need to rely on the "feel" of the work to know when the job is done. Extra torque, when needed, is provided by using the tool, with air on, as a ratchet wrench. Power is provided through planetary and worm gearing, spreading the work-load over a greater gear area to reduce tool wear. Complete details and specifications in our Air Tools Catalog. Trial-test in your plant arranged without obligation.

Buckeye Tools CORPORATION

DIVISION 34 • DAYTON 1, OHIO

▲ For more details circle **NED-185 F4** on enclosed inquiry slip ▲

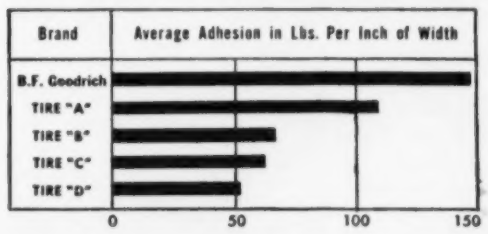
B.F.Goodrich

FREE TW TIRE AND WHEEL ANALYSIS can cut your tire maintenance costs 20% or more

TIRE maintenance costs cut 20%. Total tire costs lowered as much as 50%. Such savings have been reported by industrial tire users across the country through the use of the B. F. Goodrich Tire and Wheel Analysis Plan! Simply contact your BFG retailer or mail the coupon below. Without cost or obligation a trained B. F. Goodrich man will analyze your materials handling operations and make recommendations which will cut your tire and maintenance costs. A special TW Analysis is available for industrial equipment manufacturers.

DO YOU HAVE THIS PROBLEM? Poor adhesion of rubber to steel caused this tire to fail prematurely. The chart below, based on extensive comparison tests of leading makes of tires, proves the superior adhesion qualities of B. F. Goodrich solid industrial tires.

Tests Prove B. F. Goodrich Adhesion Best



The B. F. Goodrich Company
Tire & Equipment Division
Department TW-396, Akron 18, Ohio
Please send me:
☐ Additional information on your Tire and Wheel Analysis Plan
☐ Free copy of "Industrial Tire Guidebook"
☐ Free copy of "How to Get Extra Service Out of Solid Industrial Tires"
Name_____
Company_____
Street_____
City_____ Zone____ State____

Specify B. F. Goodrich tires when ordering new equipment

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

▲ For more details circle **NED-186 F4** on enclosed inquiry slip ▲

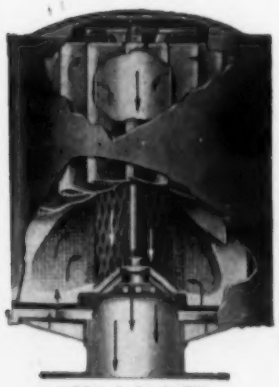
SOUTH BEND 10" BENCH LATHE

This versatile lathe is an exceptional value. It has the accuracy, speed and operating ease to simplify the machining of a wide variety of precision parts. It can be depended upon to deliver the same high performance year-after-year with a minimum of maintenance. 1" collet capacity. Priced from $1229, less electrical equipment, f.o.b. factory. Time payment terms: 10% down, balance 12 or 18 months. *Write for complete information.*

SOUTH BEND LATHE
SOUTH BEND 22, INDIANA
Building Better Tools Since 1906

▲ For more details circle NED-187 F4 on enclosed inquiry slip ▲

STAYNEW INTAKE FILTERS
HELP YOUR EQUIPMENT STAY NEW!


MODEL D Intake Filter

STAYNEW'S Positive Protection Features

- Efficiency Actually Increases With Use.
- Efficient Over a Wide Range of Loads.
- Not Affected by Temperature Changes.
- No Oil Carry-Over.
- No Oil Blow-Out On Free Air-Unloading Compressors.
- Model DS Silencer Filters Are Available Where Noise Is a Problem.
- When Cleaning Is Indicated, a Brush or Simple Vacuum Cleaning Tool Is All You Need.

Write today for Staynew Bulletin 100

DOLLINGER STAYNEW FILTERS
Representatives in Principal Cities
DOLLINGER
49 Centre Pk., Rochester 3, N.Y.

ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle NED-188 F4 on enclosed inquiry slip ▲

A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

For full information and prices, WRITE TODAY!

STACKBIN CORPORATION
1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM
"Stacked and Still Accessible"

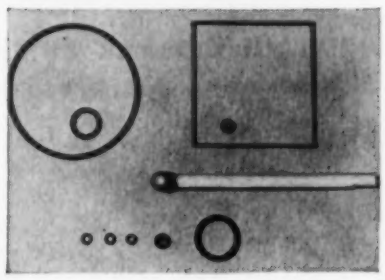
▲ For more details circle NED-189 F4 on enclosed inquiry slip ▲

SMALL TUBE CLEANERS
will clean tubes as small as ½-in. ID

Line of midget air-powered cleaning tools is designed for removing deposits from the inside of heat exchanger, condenser and other small tubes. Tools are made in a wide variety of cutter, drill and brush heads in both expanding and nonexpanding styles. They are suitable for use with either universal joints or flexible shafts for cleaning small radius curved tubes. They will handle curved tubes from 13/16 to 2⅛-in. ID and straight tubes from ½ to 1⅜-in. ID. Made by **Airetool Mfg. Co.**, 308 S. Center St., Springfield, O.

▲ For more details circle NED-190 F4 on enclosed inquiry slip ▲

SUBMINIATURE O-RINGS
and microscopic rubber parts



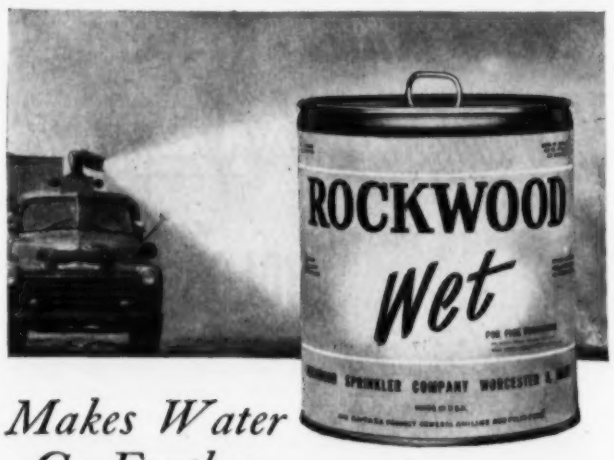
Subminiature O-rings and other microscopic rubber parts for various industrial applications are available in sizes as small as 0.010-in. cross section and 0.020-in. ID, produced by injection molding. Typical applications are in watch cases, butane gas lighters, electronic cables, water injection carburetor nozzles, small switches and miniature air valves and controls. Properties are the same as for larger counterparts. Made by **Minnesota Rubber & Gasket Co.**, 3630D Wooddale Ave., Minneapolis 16, Minn.

▲ For more details circle NED-191 F4 on enclosed inquiry slip ▲

CARBIDE TOOL FINISHER
belt finishes all cutting surfaces

Micro finish can be given to every cutting surface of carbide tools by the model 544 belt finishing machine. Intended for use after rough silicon carbide wheel grinding, the finisher has a table designed to finish all edges, including hooked tool edges. Table extension and angular table settings read directly on a protractor. Jack screw adjustment of V-belt automatically provides correct drive belt tension. Made by **Lempco Products, Inc.**, Industrial Div., 5498 Dunham Rd., Bedford, O.

▲ For more details circle NED-192 F4 on enclosed inquiry slip ▲



Makes Water Go Farther

Rockwood WET — a liquid prepared especially for fire-fighting — increases the spread and penetration of water. Used in solution of 1 part WET and 99 parts ordinary water.

Recommended for fires involving ordinary combustibles such as wood, paper, cloth. And excellent for use with WaterFOG where water is extremely scarce for fire-fighting — such as rural residences, barns, forest and grass fires, factories in outlying districts. Rockwood WET carries water into deep-seated fires in stumps, piles of leaves, duff and other spots where fires might smolder after flames have been extinguished — and where wind could fan smoldering embers into another open fire. With WET, such rekindling is reduced. Also excellent for dust control purposes.

Write for *"Fire-Fighting Products,"* Rockwood's illustrated catalog. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
346 HARLOW STREET, WORCESTER, MASS.

▲ For more details circle NED-193 F4 on enclosed inquiry slip ▲

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle NED-194 F4 on enclosed inquiry slip ▲

NEW Randall BEARING BRACKET

A sturdy, compact, 10-gauge steel bracket bearing, furnished completely assembled ready to mount, or knocked down, as desired. It features the RANDALL "Deep Well" graphited ball assembly contained in a spherical rubber cushion to assure maximum absorption of vibration, quiet operation, and constant controlled self-alignment.

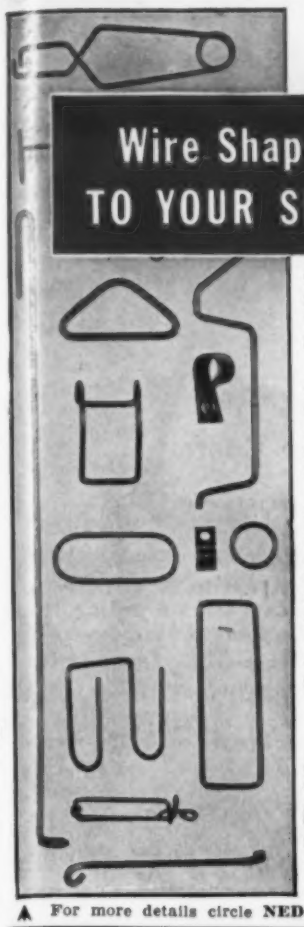
This bracket retains all the outstanding qualities that the name RANDALL implies —sturdy, low cost, quiet operation, easy installation, constant self-alignment, double lubrication, and long life. Furnished in standard shaft sizes, ⅝", ¾", 15/16", and 1" inclusive. Shaft sizes ½", 13/16" and ⅞" can be furnished on special orders in production quantities.

Write today for additional information, or ask your area distributor to show you Randall's complete line.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR
Randall
GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.
1007 S. Greenlawn Avenue Lima, Ohio

▲ For more details circle NED-195 F4 on enclosed inquiry slip ▲



Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-196 F4 on enclosed inquiry slip ▲

measure the TEL in Gasoline *Accurately-Easily*

with FISHER TEL-METER

Tetraethyllead in gasoline is measured by polarographic means in this unusual instrument and the amount in milliliters per gallon is read directly on an illuminated scale.

Fifty milliliters of sample are required for one determination and the working range of the TEL-Meter is 0 to 5 ml of TEL per gallon. It is based on the polarographic method tentatively adopted by ASTM to supplement their method D 526. The TEL-Meter is easy to operate and no special technique is required.

The instruction manual supplied with the TEL-Meter contains complete directions for preparing the standard cadmium solution and a standard lead solution. It is immediately available from stock.

Write for Booklet FS.235-Q for complete information and description of Fisher TEL-METER.

FISHER SCIENTIFIC
717 FORBES ST. PITTSBURGH 19, PA.

▲ For more details circle NED-197 F4 on enclosed inquiry slip ▲

BRING YOUR "SPECIAL" PROBLEMS TO *National*

Cold heading "Specials" can lower fastener costs!

When you have any "Special" fastening problem . . . requiring an unusual type of bolt, nut, screw, pin or headed or threaded part . . . our engineers can help you design it . . . and we can produce it economically on our wider range of cold heading equipment and specialized machinery.

For prompt assistance in solving your "Special" problems, just send us your specifications or call in your nearest National representative for full information on National's "Special Products Service" and the most complete line of standard fasteners for industry.

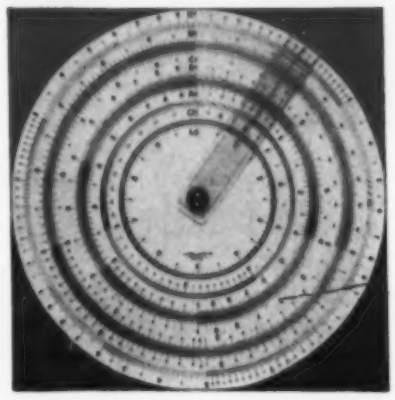
★ ★ ★

Representatives in Chicago, Cincinnati, Detroit, New York, Philadelphia, Kansas City, Milwaukee, Rochester, Denver, St. Louis, San Francisco, or Seattle—write or call direct to:

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St., Cleveland 4, Ohio

▲ For more details circle NED-198 F4 on enclosed inquiry slip ▲

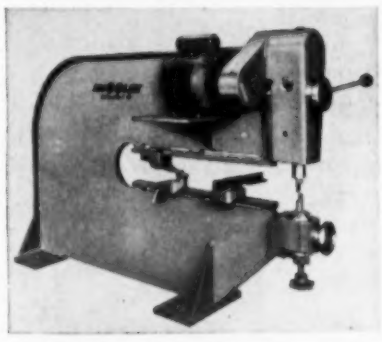
CIRCULAR SLIDE RULE
equivalent to 20-in. straight rule



This 8-in. diameter circular slide rule made of dimensionally stable Vinylite plastic is equivalent to a 20-in. straight slide rule. It performs functions of multiplication, division, proportions, finding squares or square roots and cubes or cube roots and computing reciprocals and logarithms. Sliding disks are 7½ and 8 in. diameter with graduations impressed in blue and black and protected by clear over-lamination. Instructions for use are printed on reverse side. Made by **Allegheny Plastics, Inc.**, 72 Thorn Run Rd., Coraopolis, Pa.

▲ For more details circle NED-199 F4 on enclosed inquiry slip ▲

SHEET CUTTING MACHINE
improved for higher cutting speed



Improved model G Nibblex sheet and plate cutting machine will cut 1/16-in. sheet steel at rate of 36 fpm. It is also fast on cold rolled sheet up to ⅛-in. thick and can be used for plates up to 3/16-in. thick where production cutting is not required. Nibbling, beading, folding, slotting, channeling and doming, as well as straight, circular, slot or louver cutting are jobs machine performs. Circular cutting feature enables it to cut up to 28½-in. diameter circles and, by attachment of special fixture, larger diameters can be cut. Cutter is equipped with 110-220-v, ¾-hp ac-dc motor. It delivers 2700 strokes per minute and has 28-in. throat depth and 6-in. mouth opening. Made by **Nord International Corp.**, 449-D Central Ave., Orange, N. J.

▲ For more details circle NED-200 F4 on enclosed inquiry slip ▲

Tractor Equipment

Ford Motor Co., Tractor & Implement Div.—"Power Equipment for Your Profit Zone" is title of 16-page form AD-5868 which illustrates many industrial jobs that can be handled efficiently by the Ford tractor. Complete line of Dearborn equipment, including loaders, angle dozers, blades, cranes, snow plows and mowers are featured. Some specialized tools are covered as well.

▲ For more details circle NED-201 F4 on enclosed inquiry slip ▲

NEW PIONEER Stanflex

Plastic-Coated WORK GLOVES
With Custom-Fit
Single-Seam Jersey Lining

PIONEER'S exclusive two-piece, single-seam lining (Pat. pend.) provides over 47 square inches of seam-free work surface. No seams on face of fingers, thumb, palm or back to chafe hands, wear out first. Elastic-knit jersey shapes to hand.

Wing-style thumb, curved fingers fit hand naturally, complete action freedom. Satin finish gives positive over-all grip.

Tough bonded vinyl coating has amazing resistance to cuts, snags, abrasion—outwears leather. Watertight, resists oils, acids, caustics, most chemicals.

Available in 12" gauntlet, 10" band top and knit wrist styles. Try them once—you'll make them your standard.

Bet You 6 Pairs . . .

Send us your order for 6 pairs any style Stanflex Gloves. They will outwear any plastic-coated glove you are now using, or simply return form enclosed for full refund. Order now . . . offer expires in 30 days.

The PIONEER Rubber Co. 234 Tiffin Road Willard, Ohio

Quality Gloves for 35 Years

PIONEER Stanflex

▲ For more details circle NED-202 F4 on enclosed inquiry slip ▲

INDUSTRIAL AND INSTITUTIONAL
SECTIONAL TABLES
with SWING SEATS

*Formica
Edge Grain Maple
Caf-O-Lite
Stainless Steel

MAXIMUM SEATING CAPACITY IN LIMITED SPACE!

Colorful tops and wide range of enamel paint finishes add attractive new color to industrial and institutional dining rooms and recreation rooms. Units seat 4 to 24 people. Attached seats (with or without backs) swing under table to eliminate crowding, noise and confusion of loose chairs and tables. Ideal for industry, schools, hospitals and institutions.

WRITE TODAY For NEW Catalog!

DISTRIBUTORS IN ALL PRINCIPAL CITIES
The Chicago Hardware Foundry Co.
"Dependable Since 1897"
1964 Commonwealth Ave.
North Chicago, Ill.

▲ For more details circle NED-203 F4 on enclosed inquiry slip ▲

Next Time Job-Fit Industrial Tires by Size · Tread · Compound

For tops in traction, get Goodyear's even-wearing All-Weather Tread Industrial Solid, shown above.

HERE'S how to cure the headaches that come from using the wrong industrial tires. Call your Goodyear Dealer and let him specify the "right tire for the right job." Let him show you how to get top performance from your industrial tires by job-fitting them these three ways:

Right Size for your equipment. Goodyear has over 100 different solid tire types and sizes plus a full line of pneumatic and semi-pneumatic tires — America's most complete line of industrials.

Right Tread for your plant's floor surfaces. Smooth and Grooved for easy rolling. All-Service or the famous All-Weather, wherever traction is needed.

Right Compound for longer tire life. Goodyear offers you a choice of either UNiversal chip-resistant or Neoprene oil- and acid-resistant compound at no extra cost.

Make the first step towards industrial tire savings in your plant by calling your Goodyear Dealer today. Or write:
Goodyear, Industrial Tire Sales,
Akron 16, Ohio

USE THE RIGHT TIRE FOR THE RIGHT JOB—USE

GOODYEAR
INDUSTRIAL TIRES
All-Service, All-Weather, Xtra Cushion—T. M.'s
The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-204 F4 on enclosed inquiry slip ▲

An Outstanding *New* Irvington DIAPHRAGM CLOTH...

provides ...
- exceptional solvent resistance
- greatly increased service life in many fields of application.

FOR EXAMPLE: diaphragms for fuel and vacuum pumps.

In this new diaphragm cloth, cotton base fabrics are coated with formulations of neoprene and Irvington's own resins.

FEATURES: excellent resistance to fuels and solvents; performance at high and low temperatures; low extraction loss; long flexing life.

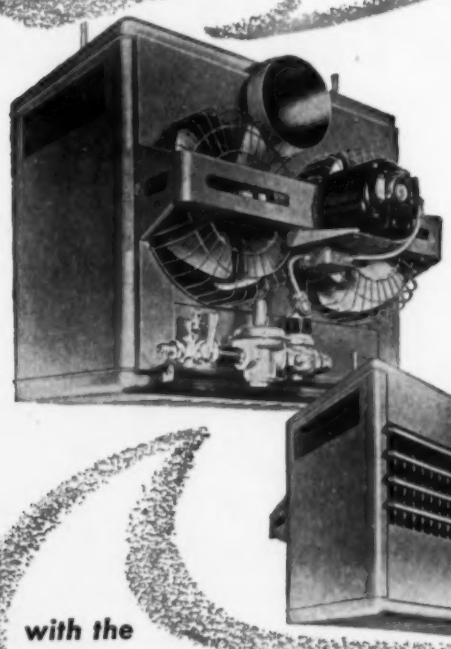
USES: Fuel pumps, carburetors, pressure regulators—air, gas, oil burners, instruments; relief valves; vacuum operated equipment: windshield wipers, signal devices, spark controls, speed governor controls.

WRITE FOR DATA on three grades.

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
47 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle NED-205 F4 on enclosed inquiry slip ▲

NEW Reznor's 250,000 BTU Gas Unit Heater



with the *Exclusive Twin-Fan Design*

Now there's more proof of Reznor engineering leadership—a new 250,000 BTU twin-fan heater. The first of its size to be offered by any nationally-recognized unit heater manufacturer. The first of any size to feature twin-fan design.

The two fans, operating from a single heavy-duty 1/4 HP motor, provide more effective air distribution at a much lower noise level than is possible with a single larger fan. The new unit moves 3200 CFM with an air throw of 90 feet.

Tremendous capacity and power—but still so compact you can fit it into almost any out-of-the-way spot. Height of the US250-F is only 33½", the same as on Reznor's 175,000 BTU unit. The new 250,000 BTU heater is 36" wide and 40 3/16" deep overall; cabinet depth is 24⅝".

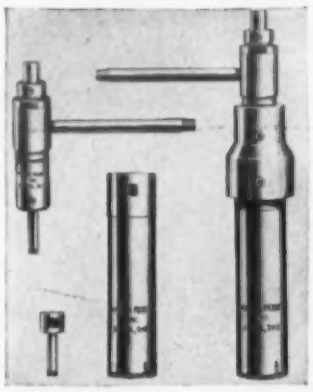
For more details on this revolutionary new unit, write today for your copy of spec sheet NPS-5401A. For the whole story on the complete Reznor line see the Reznor catalog in Sweet's Plant Engineering and Industrial Construction Files.

The Reznor Manufacturing Company
41 Union Street, Mercer, Pennsylvania

REZNOR
THE WORLD'S LARGEST-SELLING GAS UNIT HEATERS

▲ For more details circle NED-206 F4 on enclosed inquiry slip ▲

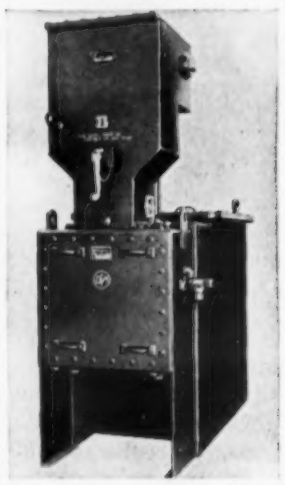
DIAMOND IMPREGNATED DRILLS for glass, tile, granite, concrete



Line of diamond impregnated drills for both laboratory and production line use can be used to drill glass, quartz, glazed tile, china, marble, granite, cinder block and concrete. Bit consists of many small diamonds distributed throughout matrix of tungsten carbide or molybdenum. New diamonds are exposed as bit wears. Matrix is entirely used up in drilling process and resetting of diamonds is unnecessary. Tests in granite show drilling rate of 1 ipm using a 1½-in. drill. Water cooled chuck attachments are available for prolonged operations. Made by **Diamond Products, Inc.**, 323 Prospect Ave., Elyria, O.

▲ For more details circle NED-207 F4 on enclosed inquiry slip ▲

MOTOR STARTERS for use in hazardous atmospheres



Built for use where hazardous atmospheres and severe corrosive service conditions are encountered, line of Class I Group D motor starters features oil-immersed connections, terminals, arcing parts and main line disconnect switches. Valimitor (volt-ampere limitor) type units provide short circuit protection for 2200-5000-v motors, irrespective of magnitude of the fault or of available capacity. Maximum possible fault current is limited to 25,000 kva steady state current. Actual rating is 50,000 kva interrupting capacity. Starters are adaptable to wide range of motor sizes without change and can be used with high in-rush motors. Made by **Electric Controller & Mfg. Co.**, 2750 E. 79th St., Cleveland 4, O.

▲ For more details circle NED-208 F4 on enclosed inquiry slip ▲

Drilling & Tapping Machines

Edlund Machinery Co.—8-page illustrated bulletin 150 describes model MS motor spindle drilling and tapping machines and attachments. Units are available in general purpose and heavy duty models, with drilling capacities of 1¼ and 1½-in. respectively. They are available with different spindle arrangements and other options. Complete specifications are given.

▲ For more details circle NED-209 F4 on enclosed inquiry slip ▲

AMP SOLISTRAND TERMINALS
NOW UP TO 600,000 CIRCULAR MILS!

AMP "SOLISTRAND" terminals, strongest and best of all non-insulated solderless connectors, are now available in wire ranges up to 600,000 circular mils! Wire is formed into one homogeneous mass by a deep pressure crimp. Use on either solid, stranded, or irregular shaped wires or combinations of each. Crimp with AMP's light weight hand hydraulic tool or AMP's new DYNA-CRIMP pneumatic-hydraulic power tool.

SEND FOR FREE CIRCULAR MIL AREA CHART—

AMP
AMP Trade-Mark Reg. U. S. Pat. Off. ©-1954 AMP
AIRCRAFT-MARINE PRODUCTS, INC.
POWER TERMINAL DIVISION
2100 Paxton Street, Harrisburg, Penna.

▲ For more details circle NED-210 F4 on enclosed inquiry slip ▲

How Jo-Block Accessories Save Special-Gage Costs

Johansson Gage Blocks and Accessories can be quickly assembled into actual working gages that perform hundreds of high-accuracy measurements. Used as "Go"—"Not Go" gages, trammels, height gages, etc., they keep gage construction costs at a minimum ... assure precision standards at every stage of manufacture.

Brown & Sharpe Jo-Blocks are available singly or in sets—for use as laboratory or working standards. The many Accessories extend their use to almost limitless applications. Write for Catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe B&S

▲ For more details circle NED-211 F4 on enclosed inquiry slip ▲

PHOTO BOOKLET shows how they solved **39 PRODUCTION PROBLEMS...**

using standard low cost MEAD UNITS to form AUTOMATIC or SEMI-AUTOMATIC MACHINES

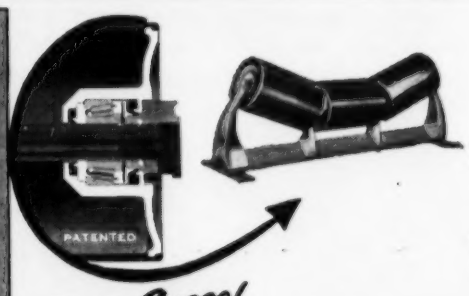
HOW TO: (1) De-burr small parts fast (2) Press 3 components together (3) Tap die cast knobs (4) Insert rubber discs into metal cups for insecticide "bombs" (5) Swage hubs to hypodermic needles (6) Ream center hole in valve plate (7) Broach 2 internal slots in brass valve inserts, handling 4 sizes (8) Press filters into copper shells and indent dimple in shell (9) Tap 2 holes 6/32 in brass brush holders. (10) Drill and tap a 1/4-20 hole 9.16 deep then ream "bell-mouth" in stainless steel forging (11) Drill and ream a hole to controlled depth in brass valve body. (12) Drill No. 52 hole thru end of solid graphite pencil. (13) Crimp eyelet and ring on pen barrel (14) Drill and tap 2 holes 8-32 in aluminum BX connectors (15) Drill 3/16 hole in aluminum part, chamfer both top and bottom of hole, approx. 2,000 per hour (16) Cap cathode tubes for TV sets at 3,200 per hour (17) Fill pen tubes with ink, insert ball point assembly at one pass (18) Bend precut copper tubes 90° at 4,000 per hour (19) Drill 2 holes in brass castings, fed to 2-spindle drill head (20) Hold plastic head, drill hole, eject (21) Drill bushing for 2 size clevis pins. All these plus 18 more examples of "how to do it" better, faster, cheaper—in our "39" Booklet!

Send for Free Photo Booklet "No. 39" today to:

MEAD SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. N-64-A Chicago 41, Illinois

▲ For more details circle NED-212 F4 on enclosed inquiry slip ▲

USST



Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

- UNIT-SEALED
- TIMKEN BEARINGS
- PRE-LUBRICATED

Write for Bulletin NED-116

ALL SIZES! ALL TYPES! CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

▲ For more details circle NED-213 F4 on enclosed inquiry slip ▲

MOORE BUSINESS FORMS

Top and Bottom Stapling Saves $17,000 in One Year

International Model C2E Stapler makes Cost Reduction News at Moore Business Forms, Inc., of Niagara Falls, New York. In one year after changing over from manual handling on skids and hand sealing cartons with glue, this company reports $17,000 saved.

Says Frank Pethyridge, *"Your Model C2E reduces carton handling by closing tops and bottoms of filled cartons simultaneously. This means we need less storage space, have less congestion, and do a better job."*

International Staplers will save you big money, too—there are over 20 models. Arrange for a Cost Reduction Study in your Shipping Department. There's no obligation.

the Royal Family of Packaging — International Staplers

International Staple & Machine Company 802 East Herrin St., Herrin, Ill.

For more details circle NED-214 F4 on enclosed inquiry slip

Brand new! Bambino for small prints—

The small new Ozalid® machine will turn out a letter-size print in less than a minute, for less than two cents.

The Bambino can supply detail prints . . . also copies of specs, lists, records, handwritten memos—saves time and work, frees your print room from small jobs.

LITTLE larger than a typewriter, the Bambino is a real Ozalid. It copies anything that is drawn, typed, printed or written on translucent paper, fabric, film, up to 9 inches wide, any length. Delivers clear, dry copies on coated Ozalid paper, cloth or film.

The Bambino is electrically operated, can be used by anybody. Economically priced at $410, it soon pays for itself.

Call the nearest Ozalid distributor (*see your phone book*) for a demonstration. Or write for free brochure to 132 Ozaway, Johnson City, New York.

OZALID—A Division of General Aniline & Film Corporation... *From Research to Reality.* In Canada, Hughes Owens Company, Ltd., Montreal.

OZALID BAMBINO—*smallest, fastest, low-priced white print machine that makes up to 200 copies an hour—for less than two cents a copy.*

OZALID

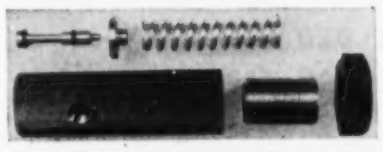
For more details circle NED-215 F4 on enclosed inquiry slip

AMMETER indicates low battery charging rates

Model 4015-C43 ammeter, for indicating low battery charging rates, has unit values on charge side that are half those on discharge side. Instrument is made for heavy equipment, stationary engines and other power units that normally operate continuously for long periods. Operator can note charging currents as low as 1 or 2 amp and needle will not be on zero when any charge is taking place. Range is discharge of 30 amp to charge of 15 amp. Other ranges are available. Unit withstands vibration, and bezel is hermetically sealed to protect dial chamber. Made by **Rochester Mfg. Co.,** 114 Rockwood St., Rochester 10, N. Y.

For more details circle NED-216 F4 on enclosed inquiry slip

PRESSURE CUTOUT protects gages, meters, instruments

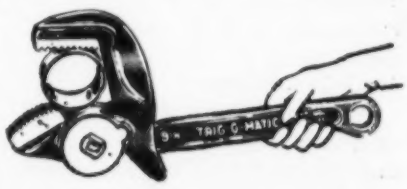


Positive protection against excessive line pressures that might damage gages, meters and instruments is provided by this gage cutout. Unit, shown in exploded view, affords sensitive response at pressures as low as 10 psi. Low pressure model has range from 10 to 300 psi, while high pressure unit has ranges from 100 to 3000 psi. A special low rate spring can be substituted in either of these two models. Body of cutout is corrosive-resistant aluminum. Made by **Greer Hydraulics, Inc.,** 452 Eighteenth St., Brooklyn 15, N. Y.

For more details circle NED-217 F4 on enclosed inquiry slip

SELF-ADJUSTING PIPE WRENCH has trigger adjustment to pipe

Instant trigger adjustment to pipe, nuts or fittings, plus non-slip ratchet-action grip are features of this self-adjusting automatic pipe wrench. "Automatic eye" adjustment control keeps hook-jaw in constant gripping action automatically as wrench is pulled or pushed with only one hand. Wrench is forged alloy steel and has replaceable, induction heat-treated, inserted jaws. It is offered in 9, 12, 15 and 25 in. sizes which open, respectively, from ¼ to 1¼, ½ to 1¾, ¾ to 2¼ and 1 to 3 in. Made by **Trig-O-Matic Tool Corp.,** Dept. L, 105 W. Monroe St., Chicago 3, Ill.



For more details circle NED-218 F4 on enclosed inquiry slip

WHICH V-BELT is best for you?

If the correct size of endless V-Belt is not readily available, or if you have to tear down machinery to install, then the best belt to use is open-end V-Belting fastened with

ALLIGATOR **V-BELT FASTENERS**

★ In this way you can make up V-Belts in *any length* to fit *any drive* the fast economical way—V-Belts that perform exceptionally well.

★ In contrast to link-type belts these ALLIGATOR fastened V-Belts have just *one* strong joint . . . *stretch and follow-up maintenance are reduced to a minimum.*

ALLIGATOR INTRODUCTORY V-BELT DRIVE UNITS

contain V-Belting, Fasteners and Tools—everything you need in one compact package to make up V-Belts quickly. Available in sizes A, B, C & D.

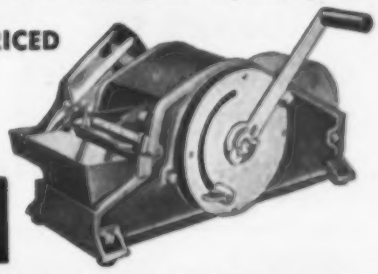
Ask for Bulletins V-215 and V-216
Order From Your Distributor

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

For more details circle NED-219 F4 on enclosed inquiry slip

Another Triumph of Derby's Designing and Engineering Skill!

THE MEDIUM PRICED Super DERBY "152"



SENSATIONAL DISPENSER DELIVERS PREDETERMINED LENGTHS OF GUMMED TAPE UP TO 30", (1" TO 3" WIDE)

Priced far lower than any machine of comparable quality now on the market, the new Derby "152" has amazing versatility and durability. Its exclusive Derby "Moisture Control System" provides a completely moistened tape every time—and its unique brush design makes unnecessary the usual two brush arrangement. For industrial packaging, specify Derby "152".

A DERBY FIRST
Stainless steel cut-off blade, guaranteed for life of machine.

LOOK AT THESE QUALITY DERBY FEATURES

- Exclusive spring clutch feed
- Visible auxiliary water reservoir
- Adjustable, vari-length handle
- Larger interlocking side frame construction
- Measuring feed stop
- Automatic tape cut-off
- Visual measuring scale
- Water heater available at extra cost

See your dealer or write

DERBY SEALERS INC. Derby, Conn.

For more details circle NED-220 F4 on enclosed inquiry slip

IF YOU MAKE OR FABRICATE PLASTICS YOU'VE GOT DUST PROBLEMS FOR ROTO-CLONE

Finishing barrel effectively hooded for removal of plastic dust by Type D ROTO-CLONE.

Today, primary producers utilize *ROTO-CLONES* to exhaust the fine chemical dust from ball mill grinders, material handling and packaging operations. Plastic fabricators apply ROTO-CLONE dust control both to the molding operation and such product finishing jobs as sanding, grinding, burnishing, machining, sawing, drilling, etc.

Every industry that produces dust in volume values the constructive services of AAF engineers—the proven performance of ROTO-CLONE equipment. If dust is a problem, call your nearby AAF representative or write us direct.

AAF **American Air Filter** COMPANY, INC.

391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-221 F4 on enclosed inquiry slip

Cutting costs in thousands of drafting rooms

Kodagraph Reproduction Materials eliminate tedious retracing . . . produce better shop prints . . . simplify print production. Whether you make your own prints or use a blueprinter, it will pay you to know them.

Paper, gives you positive photographic intermediates directly from blueprints and other negatives.

Kodagraph Contact Paper is designed for use in contact photocopy printers . . . produces outstanding negatives.

Kodagraph Autopositive Papers and Film produce positive photographic intermediates without a negative step; can be exposed in standard printmaking equipment . . . processed in standard photographic solutions. Fast, easy roomlight handling!

Kodagraph Repro-Negative

Kodagraph Projection Papers give you highest quality enlargements from microfilm or other reduced-scale negatives.

Write today for free booklet which describes all these materials.

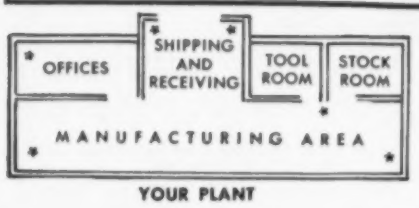
Kodagraph Reproduction Materials

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak TRADE-MARK

For more details circle NED-222 F4 on enclosed inquiry slip

HERE'S THE EFFECTIVE ANSWER TO *NEXT WINTER'S HEATING PROBLEM!*



YOUR PLANT

"Buffalo" UNIT HEATERS

"Buffalo" Highboy Heaters like the above, or Lowboy suspended models heat and ventilate large working, storage or loading areas. "Buffalo" swivel outlets distribute heat where you want it. Or for smaller, hard-to-heat areas, use compact "Buffalo" Breezo-Fin Suspended Heaters. All have trouble-free copper coils and efficient "Buffalo" Fans.

But—NOW'S the time to plan for it!

Write today for Bulletins 3703 and 3137—give yourself the time to plan for the most efficient heating!

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

▲ For more details circle **NED-223 F4** on enclosed inquiry slip ▲

YOU CAN BE **SURE**.. IF IT'S Westinghouse

FREE to D-C motor users

HERE ARE TWENTY PAGES OF FACTS ON THE LIFE-LINE SK D-C MOTOR. THIS BOOK SHOWS WHY AND HOW NEW DEPENDABILITY HAS BEEN ADDED TO THE WELL-KNOWN SK... INCLUDES INFORMATION ON CONSTRUCTION, MOUNTING, TYPES OF ENCLOSURES, PERMISSIBLE MOTORS.

GET YOUR COPY FREE! **Simply mail a penny post card asking for a copy of Life-Line SK D-C Motor Booklet, B-4595. Address: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.**

J-21567

Westinghouse *Life-Line* D-C Motors

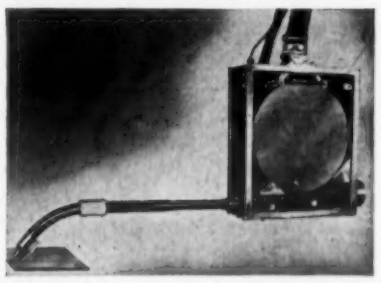
▲ For more details circle **NED-224 F4** on enclosed inquiry slip ▲

PALLETIZING PRESS
adaptable to floor level or conveyor

Fully adjustable palletizing press can be set for floor operation, with materials trucked directly on and off, or it can be raised to suitable height for incorporation in a conveyor line if required. Equipped with push button controls, press platen exerts required pressure on the load while operator passes bands around and fastens the clips. When platen is released, clipped bands tighten securely. Press has fully enclosed working parts and is operated by high capacity double enveloping worm and gear. Made by **American Baler Co.**, Foot of Center St., Bellevue, O.

▲ For more details circle **NED-225 F4** on enclosed inquiry slip ▲

SLAG-GAS SHIELDED WELDING
manually applied, semiautomatic process deposits 10 to 40 lb/hr



Electrode metal is deposited at rate of 10 to 40 lb per hour with the Bernard-Arc slag-gas shielded welding process for all grades of common steel. The manually applied, semi-automatic process utilizes thick blanket of slag produced by flux-cored electrode for shielding the molten weld metal and a separate gas, not produced by flux, for shielding the arc column.

Electrode is tubular, with flux contained within cavity of tube. As metal part is melted and transferred through arc to become part of weld metal, flux core also melts and is transferred through arc to become refining and shielding blanket of slag. Both metal and flux transfer through arc in finely divided ionized state.

Welding torch used is unusual in that welding current, arc column shielding gas, torch cooling water and electrode all pass through handle of torch. Both reel for holding coiled electrode and feeding mechanism are rigidly attached to handle of torch and entire assembly is supported by free-floating, universally-hinged boom. Thus torch can be guided effortlessly over large area. Process and equipment developed by **Bernard Welding Equipment Co.**, Dept. D, 10232 South Ave. N., Chicago 17, Ill.

▲ For more details circle **NED-226 F4** on enclosed inquiry slip ▲

You can provide easy mobility to a variety of industrial products with

IRONBOUND ALL-PURPOSE HANDLING UNITS . . .

POPULAR IRONBOUND FLO TRUK

• An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.

The HANDY for furniture and similar items.

The HAULER for cases, crates, tote boxes, etc.

The HUSKY for general use throughout the plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.
MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle **NED-227 F4** on enclosed inquiry slip ▲

Using Woven Wire Conveyor Belts?

get to know your Cambridge man!

Every Cambridge Sales Engineer—both in the field and the home office—is thoroughly trained in every phase of wire belt engineering.

That means he's equipped to give you *complete, accurate* advice and recommendations—based on our years of leading the development and applications of woven wire conveyor belts. You can be sure that the belt he recommends for you will give top performance, because every Cambridge belt is selected and fabricated to meet individual requirements. No two belts are alike. The belt you buy is designed for you alone.

Moreover, every step of belt fabrication at the plant is closely inspected to make sure the finished belt meets rigid specifications for size, mesh count and mesh opening.

So, for complete satisfaction with belt performance—get to know your Cambridge man. He's listed under "Belting-Mechanical" in your classified telephone book—or you can write direct.

IF YOU'RE NOT USING WIRE BELTS let us tell you how they can boost production and cut costs by combining movement with processing, reducing costly manual handling. No obligation, of course.

THE CAMBRIDGE WIRE CLOTH CO.
Dept. C • Cambridge 6, Maryland

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN PRINCIPAL INDUSTRIAL AREAS

FREE Catalog! Gives complete specifications for Cambridge wire belts, provides you with background knowledge for discussion with your Cambridge Sales Engineer.

▲ For more details circle **NED-228 F4** on enclosed inquiry slip ▲

NO COMPETITOR DARES COPY

Your Name Plate

Make it WORTHY Of Your Product

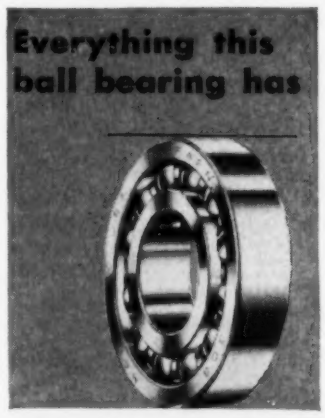
As the maker's "signature," your name plate is one thing that can set your product apart from all others. Make it *distinctive*, and let it reflect the quality you offer.

Let us help you create such a "signature." Our skilled craftsmen, long experience and modern equipment insure finest results. Send a rough sketch or blueprint for design suggestion and quotation.

Write now for "Etched or Lithographed Metal Products," with full color examples of name and instruction plates.

CHICAGO THRIFT-ETCHING CORPORATION
1555 N. SHEFFIELD AVE., CHICAGO 22, ILL., DEPT. U
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

▲ For more details circle **NED-229 F4** on enclosed inquiry slip ▲



you can get in FAFNIR Ball Bearings this small

• For extremely small shafts in instruments, home appliances, cameras and projectors, fractional h.p. motors, Fafnir makes several series of extra small ball bearings . . . in metric bore sizes down to 4 mm and in inch sizes down to ⅛". Available with standard, special or super-precision tolerances. Three constructions . . . filling slot, non-filling or spring type retainers. Can be fitted with grease shields, felt seals, Mechani-Seals or Plya-Seals. If you want top performance on a small shaft — Fafnir has the answer. Write for new Instrument Bearing Catalog. The Fafnir Bearing Company, New Britain, Conn.

FAFNIR
BALL BEARINGS

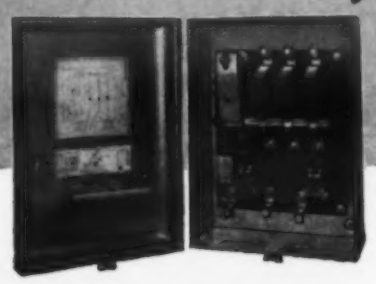
MOST COMPLETE LINE IN AMERICA

▲ For more details circle **NED-230 F4** on enclosed inquiry slip ▲

QUICK-QUENCHING

ALLIS-CHALMERS New Size 4 STARTER

Extends Contact Life



This size 4 magnetic, full voltage starter features a 150-amp, 600-volt contactor utilizing a quick-quenching arc centering blowout . . . a new principle of arc interruption which minimizes destructive burning and pitting of contacts. Contactor is clapper-type with single break contacts. Melting alloy-type relays provide overload protection. Starter available in general and special purpose enclosures.

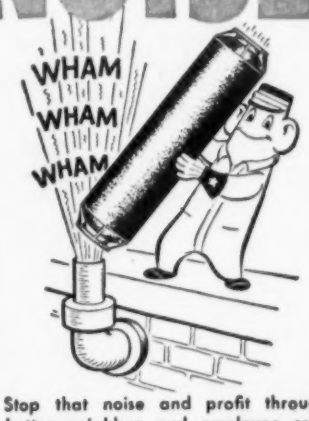
There is an Allis-Chalmers starter for every motor need. Contact your nearby A-C representative or write for selection guide 14B7733, Allis-Chalmers, Milwaukee 1, Wisconsin. A-4047

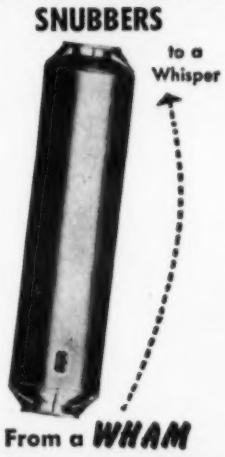
ALLIS-CHALMERS

▲ For more details circle NED-231 F4 on enclosed inquiry slip ▲

STOP THAT NOISE!

from Air, Steam and other gas discharges with BURGESS-MANNING SNUBBERS





Stop that noise and profit through better neighbor and employee relations. Avoid compensation claims.

Burgess-Manning Snubbers are engineered to effectively correct your specific noise problem. There is no obligation for recommendations. Send us a description of your problem.

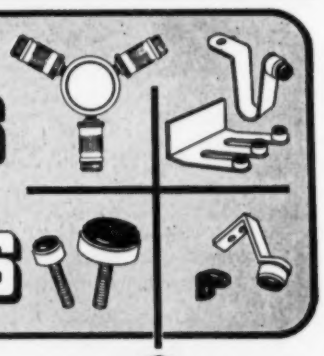
BURGESS-MANNING COMPANY

755 East Park Avenue, Libertyville, Illinois

▲ For more details circle NED-232 F4 on enclosed inquiry slip ▲

SILVER GRAPHALLOY

BRUSHES AND CONTACTS



. . . for applications requiring low electrical noise, low and constant contact drop, high current density and minimum wear.

GRAPHALLOY

EXTENSIVELY USED IN

SELSYNS • ROTATING THERMOCOUPLE and STRAIN-GAGE CIRCUITS • ROTATING JOINTS GUN-FIRE CONTROLS • DYNAMOTORS etc.

Wide range of grades available for standard and special applications.

Brush holders and coin silver slip rings available for use with Silver Graphalloy Brushes.

Write us for Data Sheets and further information. Outline your problem and we will apply our "40 years' experience" toward its solution.

OTHER GRAPHALLOY PRODUCTS:

Oil-free, self-lubricating Bushings and Bearings (applicable −100° to +300° F.; with expansion coefficient half that of steel will not seize shaft at low temperature); oil-free Piston Rings, Seal Rings, Thrust and Friction Washers, Pump Vanes.

GRAPHITE METALLIZING CORPORATION

1030 NEPPERHAN AVENUE • YONKERS, NEW YORK

▲ For more details circle NED-233 F4 on enclosed inquiry slip ▲

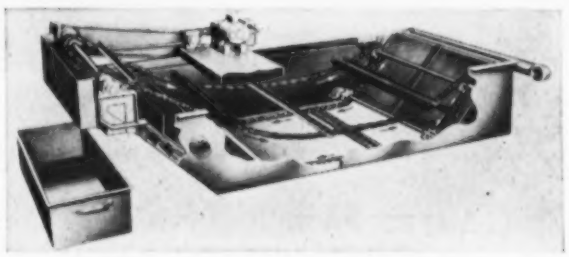
ELECTRICAL CONTACT KITS for developmental design use

Standard silver rivets and welding contact buttons for electrical contact development are provided by General Plate electrical contact kits K11 and K12, respectively. The following metal strips are also provided: 0.005-in. coin silver overlay on grade C phosphor bronze, 0.015-in. overall, spring temper; 0.015-in. fine silver on commercial bronze, 0.045-in. overall, half hard temper; 0.015-in. fine silver striped commercial bronze, 0.045-in. overall, hard temper; Bronco grade C phosphor bronze double-clad on copper, 0.012-in. overall, 25/50/25 thickness ratio, spring temper; and beryllium copper, 0.010-in. thick, half hard temper. Dimensional working drawings on vellum are included. Offered by **Metals & Controls Corp.,** General Plate Div., 1500 Forest St., Attleboro, Mass.

▲ For more details circle NED-234 F4 on enclosed inquiry slip ▲

SETTLING & FILTERING SYSTEM removes solids down to 0.004-in.

Settling and filtering unit permits continuous removal of chips, heavy solids and relatively fine solids down to 0.004-in. screen size. It handles liquids



of varying degrees of viscosity containing solids of different particle sizes and widely different weights. Settled solids are expelled with chain driven flights, reducing the amount of solids to be removed by the filter screen. Screens are continuously cleaned by brushes. Special bar type screens with accurate slot sizes provide for filtering solids that remain in suspension as liquid flows towards outlet, and are readily cleaned while machine is operating. Made by **Industrial Filtration Co.,** Dept. S-203, Lebanon, Ind.

▲ For more details circle NED-235 F4 on enclosed inquiry slip ▲

Arc Welding Accessories

Metal & Thermit Corp.—20-page illustrated 1954 catalog covers a variety of arc welding accessories including electrode holders, helmets, eye shields, ground clamps, cleaning tools, gloves and welding cable. Each item is pictured and complete specifications are given.

▲ For more details circle NED-236 F4 on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

M&M RAIL CLAMPS

Used for car stops, on loading platforms, temporary sidings, cars on grades and traveling cranes.

THIS The Dangerous Way OR THIS THE SAFE WAY

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 4

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

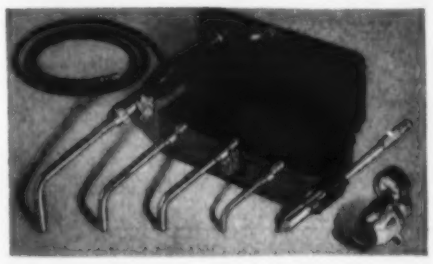
▲ For more details circle NED-237 F4 on enclosed inquiry slip ▲

Fast • Clean • Economical

Prest-O-Lite 5-in-1 OUTFIT

For All Soldering, Heating, and Brazing Needs

Save time and money on all soldering, heating, and light brazing jobs with this economical, air-acetylene outfit. No pumping, priming, or generating to waste time. No smoke or soot to clean up. One handy kit with a flame for every job. Ask your LINDE jobber for a demonstration. Or write LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Dominion Oxygen Company, Toronto.



GET IT FROM YOUR LINDE JOBBER

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

▲ For more details circle NED-238 F4 on enclosed inquiry slip ▲

GENERAL INDUSTRIAL PNEUMATIC TIRES

WIDE-BASE design is the key to every wanted feature for more profitable material handling

SAVE TIME • MONEY • LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid CASTER FORKS *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

The GENERAL TIRE & RUBBER CO. Akron, O.

▲ For more details circle NED-239 F4 on enclosed inquiry slip ▲

NEW phenolic socket has Levolier® switch dependability and push button control

Here is the first industrial socket especially designed for modern plants and modern equipment. Its functional design and construction conforms to all modern codes and safety regulations. The phenolic two piece shell is impact resisting and double thick for longer life under the hard wear and abuse of all industrial applications. Cap and casing screw together at the lever for quick opening and easy wiring. Internal mechanism consists of an extra heavy screw shell and the proven dependable Levolier Switch. The socket is fully insulated and has no exposed metal.

Send for Bulletin No. S-54 today.

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

▲ For more details circle NED-253 F4 on enclosed inquiry slip ▲

AUTOMATIC PALLET LOADER
handles pallets up to 48-in. wide

Cartons can be stacked at 15,000 per 8-hour shift with automatic pallet loader. This unit has a side pallet magazine and will handle pallets up to 48-in. wide. Two-way pallets can be placed in the magazine with their pick-up openings facing the side. Cartons or cases are conveyed from the scaling machines to the top of the Pallet Loader. Electro-mechanical devices position cartons or cases and stack them on the pallets. It is designed to handle various sizes of cartons and automatically changes pallet patterns for the appropriate carton. Pallet magazine automatically supplies pallets as preceding loads are completed and ejected from the machine. Made by **Lamson Corp.**, Dept. C18, Syracuse 1, N. Y.

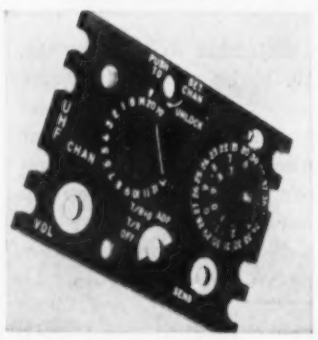
▲ For more details circle NED-256 F4 on enclosed inquiry slip ▲

GROUND TOOL BITS
high speed and cobalt steel grades

Two lines of tool bits, made of high speed steel and cobalt steel, are accurately ground on all sides with ends bevelled 10 degrees. Both types are available in range of 12 sizes from $\frac{3}{16}$ to $1\frac{1}{4}$ in. square. All are packaged for easy handling. Made by **Armstrong Bros. Tool Co.**, 5245 W. Armstrong Ave., Chicago 30, Ill.

▲ For more details circle NED-257 F4 on enclosed inquiry slip ▲

EDGE LIGHTED PANELS
have recessed engraved lettering



Made by a molded laminate process, these edge-lighted plastic panels are adaptable to aircraft, tank, locomotive and telephone, radio and television installations. Panels are practically impervious to scratches and nicks which might cause light leakage. They are accurately sized and molded edges are an integral part of front and back. Recessed engraved lettering is easy to clean. They meet requirements of specification MIL-P-7788. Made by **Kerrco Products**, Dept. N-1, Box 414, Hastings, Nebr.

▲ For more details circle NED-258 F4 on enclosed inquiry slip ▲

NAME THE CLEANING JOB

...you'll save every time with a WHEELABRATOR®

Wheelabrator . . . the modern centrifugal method of airless abrasive blast cleaning slashes costs and cleaning time. Conserves power, labor, space. Its cleaning perfection results in longer tool life, faster machining and inspection.

Thousands are in use for cleaning castings, forgings, heat treated parts, stampings, weldments; plastic deflashing; cleaning used auto parts, drums, pipe, valves, floor scrubbers; descaling steel strip, sheet, plate, etc.

26 standard sizes and models plus numerous Special Designs available for every cleaning need. Write for Catalog 74-B.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-254 F4 on enclosed inquiry slip ▲

NEW DESIGN OF THIS PULLEY LINE GIVES LONGER WEAR IN ANY SERVICE

American All-Steel Conveyor Pulleys in 400 different sizes outlast any other pulley made. End discs and hubs fabricated to insure concentricity. Special welding techniques give extra strength and maximum weld penetration to all joints. Available in four types for all classes of service.

American Steel-Split Pulleys built to run at 6000 feet per minute with an ample factor of safety are available from distributors everywhere. Interchangeable bushings mean quick, tight fit on any shaft. Over 500 sizes. See your distributor or write today for free catalogs.

AMERICAN PULLEY CO.
4294 Wissahickon Ave.
Philadelphia 29, Pa.
Gentlemen: Please send full information on _____. No obligation.
Name _____ Title _____
Company _____
Address _____
City _____ Zone ____ State ____

Power Transmission By AMERICAN PULLEY COMPANY

"At the PROFIT end of the machine"

▲ For more details circle NED-255 F4 on enclosed inquiry slip ▲

NEW COMPACT POWERFUL

Quiet!

ELECTRIC VIBRATOR

To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.

2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-259 F4 on enclosed inquiry slip ▲

S'matter, Swami, won't it work?

Our near-sighted snake charmer friend should know he can get more out of a wire if it has a well soldered connection. Making the right kind of flux core solder for every application has been Kester's sole business for more than 50 years. For top quality solder, your best buy, today as always, is Kester Solder!

DO YOU HAVE the free Kester Technical Manual, "SOLDER and Soldering Technique"? Better write for your copy today!

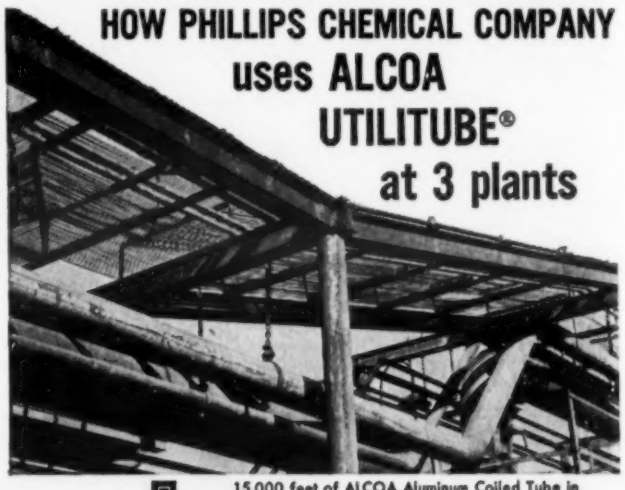
KESTER

SOLDER COMPANY

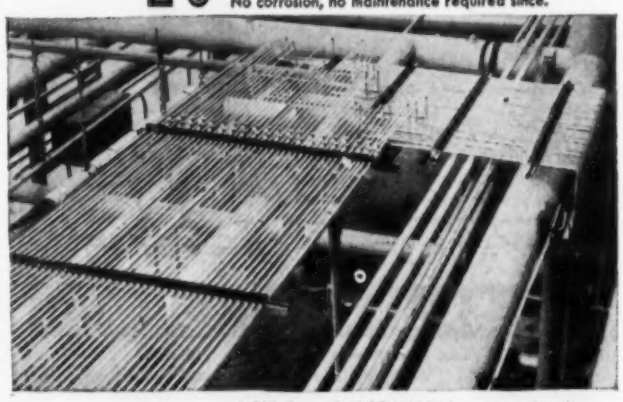
4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

▲ For more details circle NED-260 F4 on enclosed inquiry slip ▲

HOW PHILLIPS CHEMICAL COMPANY uses ALCOA UTILITUBE® at 3 plants



1. 15,000 feet of ALCOA Aluminum Coiled Tube in exposed air line service (15 PSI) at Pyridine Plant, Pasadena, Texas. Installed summer, 1952. No corrosion, no maintenance required since.



2. 6,500 feet of ALCOA Utilitube serves dry air (75 PSI) to pneumatic controls and instruments at Philblack Plant, Borger, Texas. Installed, August, 1952. Exposed to H_2S since then. No corrosion, no maintenance.

3. (Not shown) 7,500 feet of ALCOA Utilitube has been serving air (20 PSI) to instruments at Goldsmith Sulfur Plant, Goldsmith, Texas, since January, 1952. Tubing has required no maintenance, is in excellent condition.

You, too, can *use Alcoa Utilitube to save money.* It's the lowest cost corrosion-resistant metal tube you can buy . . . may very easily cut your tube costs by 40 per cent.

Use Alcoa Utilitube for fuel and lube lines, for hydraulic fluids, for air and refrigerants. It will not gum or sludge in petroleum service; discolor or contaminate the fluid it carries.

Alcoa Utilitube forms, flares and bends as easy as annealed copper yet work hardens less. At sub-zero temperatures it actually gets stronger!

Alcoa Utilitube and Fittings are available from your aluminum distributor. For complete information, write for the booklet, *Alcoa Utilitube.*

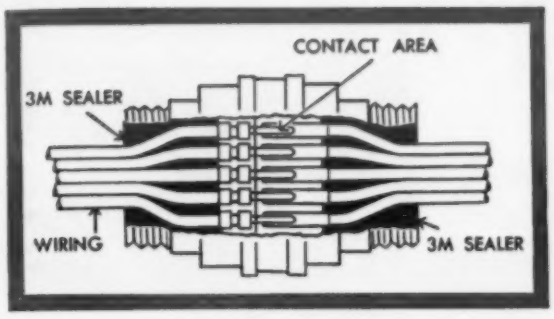
ALUMINUM COMPANY OF AMERICA
1002-F Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

▲ For more details circle NED-261 F4 on enclosed inquiry slip ▲

NEW permanent seal!



Protects connectors against vibration, moisture and wear

It's 1120-PC—a new low-voltage dielectric sealer that protects electrical connectors against vibration, salt air or condensed moisture. Originally introduced by 3M for aircraft electronic connector plugs, it is now being evaluated by radio, TV and other industrial electronic fields.

Looking for the practical answer to your low-voltage electrical potting and sealing problems? Send for complete data on 1120-PC today!

For details, write 3M, Dept. 86,417 Piquette Ave., Detroit 2, Michigan.

3M COMPANY — MINNESOTA MINING AND MANUFACTURING COMPANY, ADHESIVES AND COATINGS DIVISION

see our catalog in PRODUCT DESIGN FILE or write for copy

▲ For more details circle **NED-262 F4** on enclosed inquiry slip ▲

HOW TO SELECT STRAPPING TOOLS

● Complete catalog offered by Brainard Steel lists applications of all types of tools and accessories for tensional and heavy-duty steel strapping. Includes specifications; fully illustrated. With the Brainard Strapping System, you can improve efficiency of packaging, carloading, palletizing, bundling, export crating, and warehousing —Brainard's complete line covers over 1000 kinds of strapping, tools and accessories. Get the complete story now.

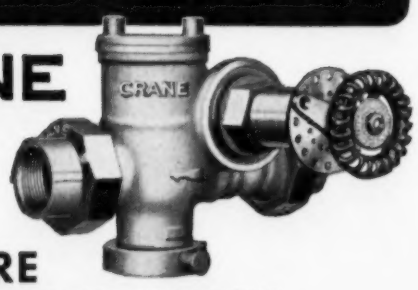
Brainard — STEEL DIVISION, SHARON STEEL CORPORATION

For Catalog write:
BRAINARD STEEL DIVISION
Griswold Street, Dept. HH-6
Warren, Ohio

▲ For more details circle **NED-263 F4** on enclosed inquiry slip ▲

in-and-out RELIABILITY

CRANE



PRESSURE REGULATORS

250 POUNDS STEAM OR AIR

When supply pressure is greater than you want . . . when you need automatic protection for valuable equipment—then install Crane quality pressure regulators. They *hold* their predetermined outlet pressure even when there is no demand—even on dead-end service.

Simple to operate, compact, convenient to maintain. Made of Crane quality bronze with malleable iron union rings and tailpieces on inlet and outlet ends. Fitted with regulating springs and diaphragms for any of the following ranges of outlet pressure: 1 to 10, 5 to 30, 20 to 100 and 90 to 200 pounds. Sizes ½ to 2-inch. Check your Crane Catalog for complete information.

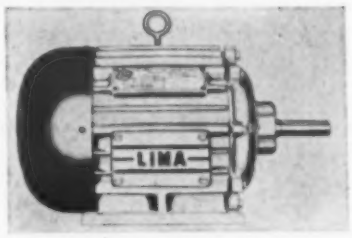
CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

▲ For more details circle **NED-264 F4** on enclosed inquiry slip ▲

EXPLOSIONPROOF MOTORS available in ¾ to 20-hp ratings



Type EX and ED explosionproof and dust-tight motors are UL approved and are made in ¾ through 20-hp ratings in NEMA frame sizes 224 to 326 inclusive for operation on two or three-phase current and all commercial frequencies and voltages below 600. Frame has deep integrally cast fins which provide large cooling area without increasing frame diameter and air is forced at high speeds over the motor by an external fan. Fan housing is designed to direct the air over the motor in such a way as to continuously blow it clean. Made by **Lima Electric Motor Co.**, 78 Findlay Rd., Lima, O.

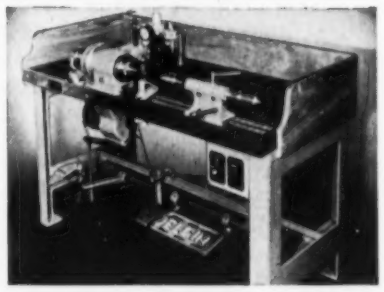
▲ For more details circle **NED-265 F4** on enclosed inquiry slip ▲

GROUNDING RECEPTACLE three-wire duplex surface type

Two current carrying contacts plus a third contact for U-shaped grounding blades on special three-wire caps are designed into the model 8672 surface type duplex receptacle. Ground terminals are identified by green hexagonal binding screws. Device is used with nonmetallic cable and has knockouts for No. 12 or 14 cable. It is rated at 15 amp, 125 v. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

▲ For more details circle **NED-266 F4** on enclosed inquiry slip ▲

PRODUCTION LATHE is lever and foot pedal operated

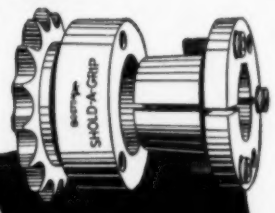


Instant spindle run and stop and collet position control are features of desk model production lathe which has a desk-high bed and spindle for convenience of women operators. Operating lever and foot pedals are located for ease of operation. Models are made with a ¾-in. draw-in collet and a 11/16-in. stationary collet. Lathe has a 7-in. swing, 15 in. between centers and speeds to 4000 rpm. It may be equipped with compound slide rest, double cross slide, six-hole turret and other standard accessories. Made by **Elgin Tool Works, Inc.**, Dept. P, 1771 Berteau Ave., Chicago 13, Ill.

▲ For more details circle **NED-267 F4** on enclosed inquiry slip ▲

How cost-wise buyers rate

INTERCHANGEABLE TAPERED **BUSHINGS and SPROCKETS**



GOOD BETTER ✓ BOSTON *Gear*

SHOLD-A-GRIP
ELIMINATES RE-BORING
Fit all common sprocket sizes to broader range of shaft sizes

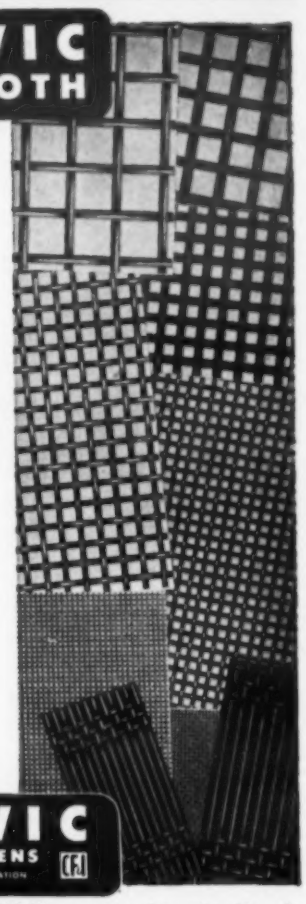
IN STOCK AT 92 BOSTON *Gear* DISTRIBUTORS at Factory Prices

Look under "Gears" in the Yellow Classified Section of your Telephone Directory for the one nearest you.

Get Sprocket Catalog Supplement SC-2, and handy SHOLD-A-GRIP Selection Chart. Saves time and trouble in drive assembly and maintenance. Ask your BOSTON Gear Distributor, or write: Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle **NED-268 F4** on enclosed inquiry slip ▲

CAL-WIC WIRE CLOTH



meets all special job demands

Whatever your special job demands may be—filtering, screening, grading, cleaning, or any other type of processing — Cal-Wic Wire Cloth is available in the right weave, mesh or weight to give long-lasting dependable service.

To order, write or phone our nearest district sales office.

THE COLORADO FUEL AND IRON CORP.
Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION
Atlanta • Boston • Buffalo • Chicago
Detroit • New Orleans • New York
Philadelphia

CAL-WIC INDUSTRIAL SCREENS — THE COLORADO FUEL AND IRON CORPORATION

1250

▲ For more details circle **NED-269 F4** on enclosed inquiry slip ▲

GLOBE OiLIFT® simplifies moving paper and supplies between printing plant levels

In a busy printing plant, the receiving department is about five feet below the level of the area where paper cutters and presses are located. Moving paper stock and supplies between these levels was a two-man job that often delayed presses and tied-up the company's fork lift truck.

The problem was solved by installing a standard Globe Loading Lift!

Now, material to be moved between receiving department and the upper plant level is rolled onto the 6′ x 8′ checkered-steel platform of the Globe Loading Lift. A hydraulic cylinder 10⅝″ in diameter furnishes the 6000 lbs. lifting capacity that raises the platform to the upper level smoothly and *safely*. Push-button controls are located on the platform itself, and one man can handle the job of moving loads from one level to the other. This results in substantial savings in labor costs and the elimination of costly delays.

This installation is just one example of the many problems of lifting, loading, positioning, and materials handling solved by Globe OiLIFTS. Use the coupon to get additional data.

Here's a load being moved between plant levels. Operator's hand is on the conveniently located push-button controls.

Here a load of paper stock on pallets is rolled onto the Globe Lift at the lower level where platform recesses flush with the floor.

Globe Hydraulic Lifts are available with either one or two cylinders. Capacities up to 40,000 pounds. Standard lift height of 58″ can be varied to suit special needs. Electric-motor pump or compressed air-line. Push-button or lever control at upper or lower level, or on the platform itself.

GLOBE — THE BEST LIFT

NED-625A

Globe Hoist Company
East Mermaid Lane at Queen Street
Philadelphia 18, Pa.

Please send me additional information on Globe OiLIFTS.

Name.....Company.....
Address.....
City.....Zone....State.....

▲ For more details circle **NED-270 F4** on enclosed inquiry slip ▲

GUARANTEES

PERFORMANCE of SPEEDAIRE

ALL Cleveland Speedaire units are pre-tested under *actual job load.* This final check assures you that every Speedaire you buy is *right and ready* for the job.

Speedaire is Cleveland's fan-cooled worm gear speed reducer. Because of the reduction in unit size that its use permits, a Speedaire unit *costs materially less* per horsepower transmitted.

Write for Catalog 400 for full engineering data on Speedaire and all other Cleveland units. The Cleveland Worm and Gear Co., 3283 E. 80th St., Cleveland 4, Ohio.

CLEVELAND WORM GEAR
Speed Reducers

Affiliate: The Farval Corporation, Centralized Systems of Lubrication

▲ For more details circle NED-271 F4 on enclosed inquiry slip ▲

TWELVE REASONS WHY...

Bendix* Electric Fuel Pump performs better ... lasts longer!

- **Performance-proven**
- **Longer Life • No Pressure "Droop"**
- **Dependable Operation at −75°F.**
- **Improves Low Temperature Starting**
- **Built-in Pressure Release**
- **Eliminates Vapor Lock**
- **Delivers More Gallons per Hour**
- **Easy to Install • Easy to Service**
- **Low Power Requirements**
- **Economical Operation**
- **Light Weight • Compact**
- **Rugged • Tamper-proof**

Learn more about this new and improved fuel pump. Write for descriptive folder and specifications.

*REG. U.S. PAT. OFF.

ECLIPSE MACHINE DIVISION
ELMIRA, N. Y.

THE NAME BEHIND MILLIONS TRUST Bendix AVIATION CORPORATION

Bendix* Electric Fuel Pump
Bendix* Folo-Thru Starter Drive Stromberg* Aeroquad Carburetor

▲ For more details circle NED-272 F4 on enclosed inquiry slip ▲

HIGH-VOLTAGE TESTER
range is 500 to 2500 v ac

High-voltage testing unit operates from 115-v outlets and has six testing voltage settings between 50 and 2500 v ac. It is useful for production type work in testing for defective insulation, grounds, shorts or similar faults in electrical assemblies. Buzzer sounds and a light flashes when a defective part is tested. Safety test prods have pistol grips and test leads with bayonet connectors for easy replacement. On-off switch, pilot light and voltage selector knob are incorporated. Made by **Slaughter Co.,** Dept. N, 1700 Nicklin Ave., Piqua 1, O.

▲ For more details circle NED-273 F4 on enclosed inquiry slip ▲

HEAVY DUTY HOISTS
made in capacities up to 40 tons

Line of heavy duty spur geared hoists is designed to Army and Navy specifications for rapid lifting and lowering with minimum effort. They are made in capacities up to 40 tons (20-ton model is shown) and feature precision cut gears, Timken roller bearings in load wheel and sheaves, drop forged alloy steel hooks and retaining brake. Friction-free swivel hook prevents twisting of load chain. Load sheave is protected by a chain guide to eliminate chain fouling. Made by **Ohio Hoist & Mfg. Co.,** Broadway & Chaincraft Rd., Cleveland 5, O.

▲ For more details circle NED-274 F4 on enclosed inquiry slip ▲

DO YOU KNOW? Your private office can now be furnished with modern metal business furniture in attractive decorator colors. A distinctive office can be purchased in one complete package which includes recommendations for drapery, carpeting, paints and accessories. The Sierra Office has a desk and console unit finished in Manila Tan with green Textolite tops. All aluminum, including chairs and trim is anodized bronze-gold. The Cascade Office has desk, phone stand and bookcase finished in Glen Green. GF packaged offices are made by General Fireproofing Co., Dept. NE, Dennick Ave., Youngstown 1, O.

▲ For more details circle NED-275 F4 on enclosed inquiry slip ▲

Fielden

RESISTANCE THERMOMETER RECORDER

- *Ideal for measurement of temperatures up to 950°F.*
- *Innerent accuracy ± 0.5% of Full Scale*
- *Linear scale on all spans up to 600°F.*
- *Recorder has interchangeable measuring unit which permits change in range or measurement without rewiring. Up to 4 simultaneous inputs permit addition, subtraction or averaging.*

This new, low-cost Fielden self-balancing type recorder uses an AC actuated bridge circuit that eliminates direct current source and replacement of dry cells. Measures spans of 50°F. or less if required. Full scale pen travel in 3.5 sec. Sensitivity ±0.5% of full scale, dead spot 0.1% of full scale. Recorder adaptable to many uses. Write today for detailed information to Dept. F.

Robertshaw-Fulton
CONTROLS COMPANY

FIELDEN INSTRUMENT DIVISION
2920 N. 4th St., Dept. F. Philadelphia 33, Pa.

Dollar for Dollar-Your Best Instrument Value

▲ For more details circle NED-276 F4 on enclosed inquiry slip ▲

AND BE SURE!

Red-E Precision CENTERS are the answer to all your turning and grinding ACCURACY problems.

Built to take weights up to 200 tons. Speeds to 4000 RPM.

Your ONE Source

for ALL Centers — over 200 models — Standards and Specials for Lathes, Grinding, Milling, Spinning, Turret, Screw Machining, Burnishing and Gear Cutting operations.

ACCURACY is GUARANTEED

Call Your Friendly Distributor

CENTER Specialists Since 1908

RED-E TOOLS READY TOOL COMPANY
561 Ironiston Ave • Bridgeport, Conn.

▲ For more details circle NED-277 F4 on enclosed inquiry slip ▲

"After testing all types ... we standardized on Magcoa Dockboards"

Says James McCabe, Chief Industrial Engineer, American Maize-Products Co., Roby, Indiana — "Before standardizing on Magcoa Dockboards," says Mr. McCabe, "we tried all types—both heavy-metal and another type of light-metal, 'home-made' and specially made.

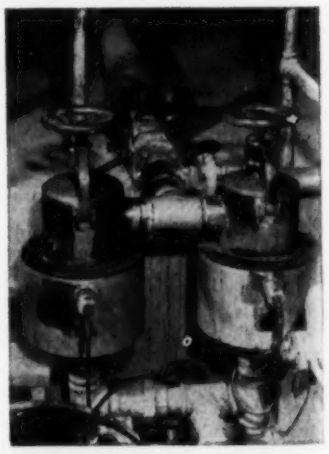
"Cost records for our 31 Magcoa Dockboards, used on both truck docks and rail docks," continues Mr. McCabe, "show a measurable savings of more than $2500 a year in labor, truck and tire maintenance—plus an immeasurable employee relations benefit because our Magcoa Dockboards are safe and save strain. They actually paid for themselves in their first three years of service."

Write for a copy of the new Magcoa Facts File.

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

▲ For more details circle NED-278 F4 on enclosed inquiry slip ▲

This manufacturer "doubled the guard" to eliminate Iron Contamination



FERRO FILTER

Magnetic Separators

installed in pairs have helped our customer substantially reduce losses due to iron contamination, improve the quality of the product and increase production. Make sure you have this protection at all trouble spots to insure the removal of iron particles from slurries and other liquid suspensions.

Send for BULLETIN 56-E for complete data on installation and operation as well as types and sizes available.

S. G. FRANTZ CO., Inc.
P. O. Box 1138 Trenton 6, N. J.

▲ For more details circle NED-279 F4 on enclosed inquiry slip ▲

SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER

Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.

SIZES: 20" focal lgth. 1½ power – 14" focal lgth., 1¾ power, 10" focal lgth., 2¼ power; 8" focal lgth., 2¾ power . . . . . price each ONLY 10.50

HYDRAULIC EQUIPMENT

We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.

SPECIAL

Gives 20,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 29 USED 29.95 NEW 43.95

OTC TOOLS

See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

HYDRAULIC HAND PUMP

Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle . . . 12.75

NEW 10 TON HYDRAULIC PRESS

SIZE: 60" high 27" wide 29" base

Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4½" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. 129.00

HYDRAULIC ACCUMULATORS

A-2B FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75

A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50

NOTE: Stocks include bargains in Hydraulic Pumps – Valves – Motors – Boosters – as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG

320 PAGE-1954 EDITION

Packed with SENSATIONAL VALUES in GOV'T SURPLUS – FACTORY CLOSE-OUTS – and GENERAL MERCHANDISE. Fully priced and illustrated. Thousands of items in Machine and Industrial Tools – Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES – PRICED TO SELL!

Palley SUPPLY CO. 2263 E. VERNON AVE., DEPT. NED-6 LOS ANGELES 58, CALIF.

Pay by M.O. or check. P.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

For more details circle NED-280 F4 on enclosed inquiry slip

New... Air Drill World's Smallest

It's Really Amazing!

- 3/16" HEAVY DUTY DRILLING
- NEARLY 1/4 H.P.... STALLPROOF
- 1/4" LIGHT DUTY DRILLING
- WEIGHS LESS THAN 1½ LBS.
- USES 38% LESS AIR

Highest precision construction makes this drill revolutionary!

Write ARO or see your ARO distributor.

THE ARO EQUIPMENT CORP., BRYAN, OHIO

Offices in All Principal Cities

In Canada—Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO AIR TOOLS

Also . . . AIR HOISTS . . . LUBE EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

For more details circle NED-281 F4 on enclosed inquiry slip

Engineered MOLDED RUBBER PARTS

Serving the —

Aircraft
Automotive
Appliance
Machinery
Electrical & Electronic
Safety Equip.
Instrument
and other industries

ACUSHNET specializes in "precision" molded rubber parts engineered to specifications. Utilizing the most modern techniques our Engineering Staff constantly is developing new approaches to old problems. By ingenious mold designing and compounding, yesterday's skepticism of rubber for critical uses has changed to complete confidence in this versatile material for application in countless vital assemblies.

Acushnet PROCESS COMPANY

Send for your copy of the Acushnet Rubber Handbook.

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-282 F4 on enclosed inquiry slip

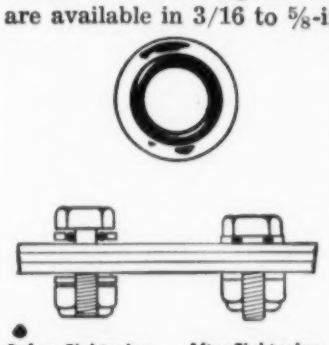
AIR-OPERATED STAPLER for high speed crating and packing

Lightweight design, capacity of 104 staples and powerful driving ability makes Calwire model CS air-operated stapler practical for high speed nailing, crating and production - line packing operations. It can be used with all crating woods and will even drive into oak and other hardwoods. Air inlet can be connected at outer end of pistol grip handle for portable use or on top of stapler for production line use. Model CS1 handles ¾-in. wide staples from ⅞ to 1¼ in. high; model CS2 handles staples 1-in. wide by 21/32-in. high; and model CS3 drives ⅜-in. wide staples from ½ to 1 in. high Made by **California Wire Products Co.**, Dept. NE, 326-328 N.E. Third Ave., Visalia, Calif.

For more details circle NED-283 F4 on enclosed inquiry slip

LEAKPROOF WASHER rubber ring is bonded to washer

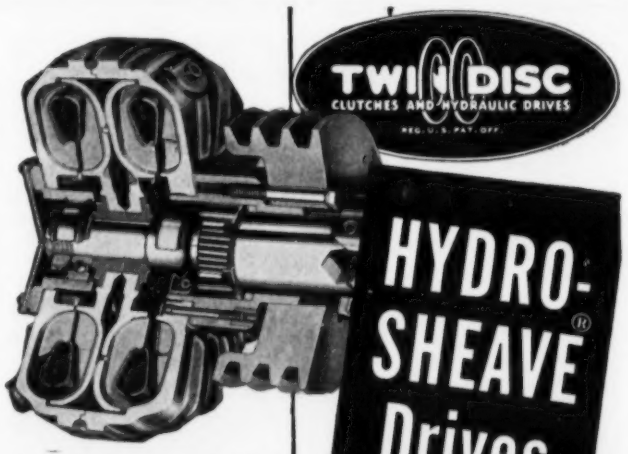
Rubber O-ring is permanently bonded to the washer of this Duo-Seal ring and washer combination. Units are available in 3/16 to ⅝-in. nominal bolt diameters and provide leak-proof sealing against fluids, gases or air when used on fasteners in pressurized or sealed systems. Seals are color-coded according to use, for fuel, general-purpose use, high temperature or oil. They are impervious to atmospheric elements, salt water, gasoline, oil and most organic solvents. When bolt is tightened down, O-ring assumes a square compressed section and will not work loose or leak under vibration. Made by **Rubber Tech, Inc.**, 19115 S. Hamilton St., Gardena, Calif.



For more details circle NED-284 F4 on enclosed inquiry slip

DO YOU KNOW? The straddle carrier is a versatile type of industrial power truck. It handles loads weighing up to 22½ tons easily and will travel over paved areas as well as rough terrain. Just how the Ross straddle carrier truck operates in various types of industries is clearly demonstrated in a 25-minute sound motion picture entitled "Over-The-Load Materials Handling." Film is available on free loan basis from Clark Equipment Co., 1952 Arze St., Battle Creek, Mich.

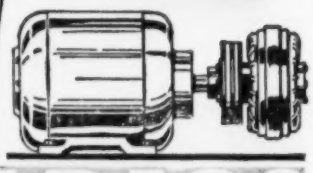
For more details circle NED-285 F4 on enclosed inquiry slip



TWIN DISC CLUTCHES AND HYDRAULIC DRIVES

HYDRO-SHEAVE® Drives

Prevent motor burn-outs from heavy starting loads, by slipping Twin Disc HYDRO-SHEAVE Drives on the end of your motor shafts. Twin Disc Double-Circuit design fluid coupling cushions overloads; permits motor to accelerate to efficient speed and pick up loads smoothly. For motors (and engines) from ¼ to 50 hp. Write for name of nearest Authorized Hydraulic Dealer.



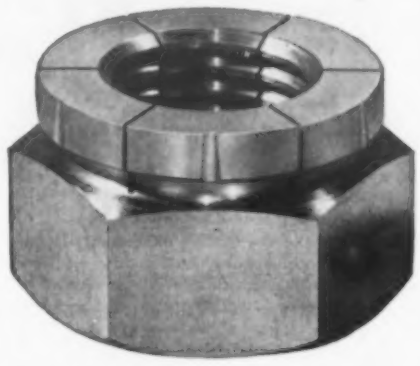
TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

For more details circle NED-286 F4 on enclosed inquiry slip

they're ONE piece, ALL metal...



no parts to work loose or get lost

Because they are one piece—nothing to assemble, come apart, lose or forget—FLEXLOC locknuts save production time. Because they are all metal, they lock and stay tight at higher temperatures. See your local industrial distributor for literature and samples or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION

SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-287 F4 on enclosed inquiry slip

New Hunter Industrial Fan

POWERFUL, LOW-COST VENTILATION

FEATURES:

- Streamlined orifice for efficient air entrance
- Aluminum alloy blades—non-rusting, non-crystallizing, non-overloading
- "Gull Wing Design" airfoil blades for strength and uniform pressure
- Effective up to ½ in. static pressure
- Heavy continuous-duty motor
- Permanently lubricated and sealed for life
- Direct-drive for reduced maintenance costs
- Automatic shutters to fit all fan sizes

Hunter SINCE 1906

CLIP AND MAIL NOW FOR COMPLETE DATA

Hunter Fan & Ventilating Company
373 S. Front St., Memphis 2, Tenn.
Send complete information on Hunter Industrial Fan to:
Name_____
Address_____

For specific recommendations, advise us of your ventilation problem.

For more details circle NED-288 F4 on enclosed inquiry slip

▲ For more details circle NED-289 F4 on enclosed inquiry slip ▲

NOW Constant Tension From Start To Finish In Winding Roll-Fed Material

Never Before Anything So Efficient · Simple · Versatile

This is your chance to obtain a higher quality of wound material than ever before – and to save substantially on operating and maintenance costs at the same time.

You've never seen anything like the Hobbs "Alquist" Winder. It's in a class by itself. No other winding device can match it for simplicity, efficiency and flexibility.

OPERATES ON A. C.

Here is a squirrel cage three-phase A. C. motor, flange mounted to a gear reducer. You connect it *directly* to your rewind shaft. It is entirely independent of the main machine drive. You plug it into your present three-phase power outlet – no transformers or converters to bother with. Then you set a knob to the desired tension and walk away.

AUTOMATICALLY SENSES TORQUE

From the start to the very finish of your rewind operation, the "Alquist" constantly and accurately maintains the desired tension – protects even the most delicate materials from stretching, breaking or contracting. Automatically the "Alquist" senses the increase in torque as the roll diameter builds up and it slows down the speed of the shaft in direct proportion. Constant tension can be maintained in a roll build-up of as high as 10 to 1.

ECONOMICAL, FLEXIBLE

Power utilization of the "Alquist" is as high as 80%, approximately four times greater than other types of winders. This means important savings in energy. Maintenance is as slight as with any normal A. C. motor – there are no brushes or tubes to contend with. The "Alquist" is compact, saves you floor space. It is clean, there are no belts to slip and stir up dirt. It is flexible – connect it directly to the rewind shaft, or remotely by chain and sprockets. And it needs no supervision, saves you labor costs.

PROVED PERFORMANCE

The "Alquist" already has been proved in winding textiles, rubber, foil, cable, wire, plastics, paper – materials of almost any type or weight. And it can be adapted to meet any production requirement.

Find out for yourself just why the Hobbs "Alquist" Winder can make such a big difference – how it can give you increased production through *positive* quality control. Mail coupon below for free information. No obligation.

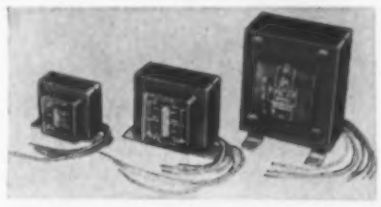
HOBBS MANUFACTURING CO.
41 Salisbury St., Worcester 5, Mass.
EST. 1883

Kindly send complete information on the new Hobbs "Alquist" Winder.

Name..... Title.....
Company.....
Street.....
City..... Zone..... State.....

▲ For more details circle NED-290 F4 on enclosed inquiry slip ▲

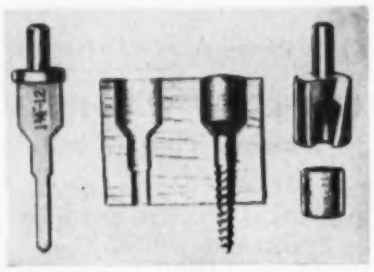
TRANSFORMERS & REACTORS are encapsulated in plastic



Custom plastic molded transformers and reactors called Telectrans, for use in electronic devices are manufactured with sealed flexible leads of any length and with any type of termination. Transformers and reactors themselves are plastic encapsulated and meet various military specifications. Compact, lightweight units are custom designed for all types of audio, power and low frequency RF applications. Made by **Telectro Industries Corp.,** Dept. NED 5, 35-18 37th St., Long Island City 1, N. Y.

▲ For more details circle NED-291 F4 on enclosed inquiry slip ▲

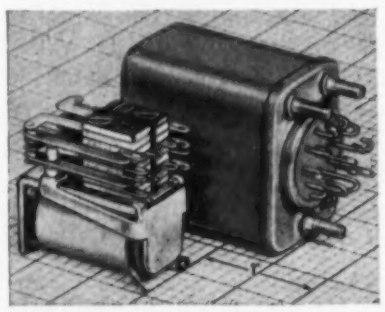
SCREWED FASTENING TOOLS for making and covering screw holes



Set of tools for generating and concealing screw holes in wood consists of combination screw drill and counterbore and a plug cutter. Cutters are made to match the counterbores for exact fit of the plug. They are available in 3/8, 1/2 and 5/8-in. diameters. Tools are fabricated from quality steel. Made by **Edw. L. Sibley Mfg. Co.,** Dept. N, 222 W. Main St., Bennington, Vt.

▲ For more details circle NED-292 F4 on enclosed inquiry slip ▲

SUBMINIATURE RELAY has 14-pin solder terminal header



Class 33 subminiature direct current relay meets requirements for operation in limited space. Open type with double-pole double-throw contacts measures 1 11/32 x 11/16 x 1 in., while hermetically sealed units dimensions are 31/32 x 1 11/32 x 1 41/64 in. It has a 14-pin solder terminal header and six contact springs per stack. It is available to meet military specifications for shock and vibration and to withstand wide temperature variations. Relay can be furnished for any voltage up to 110 v dc and with up to six contact arms per stack, or 12 arms total. Made by **Magnecraft Electric Co.,** 1442-G. W. Van Buren St., Chicago 7, Ill.

▲ For more details circle NED-293 F4 on enclosed inquiry slip ▲

PUNCHES 15" HOLES IN 3/16" STEEL

Also Performs Bending and Flanging Operations

The big holes in Warner & Swasey's Gradall boom plates are punched and flanged on a Steelweld Bending Press. Practically all other steel on the Gradalls is formed and punched on the press. The versatility of Steelweld Presses to handle efficiently many varied operations has proven of great advantage to many users.

STEELWELD BENDING PRESSES CATALOG No. 2010

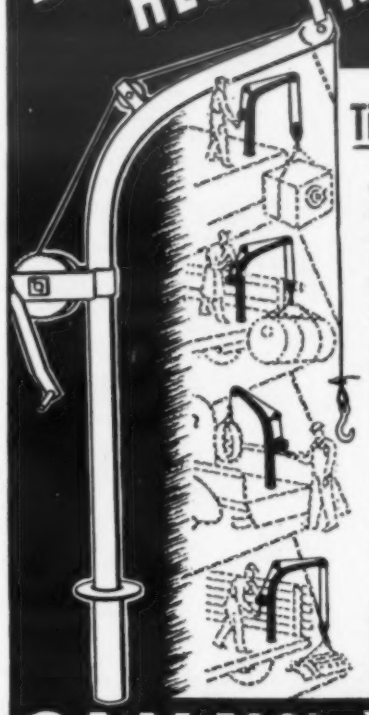
Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6653 East 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle NED-294 F4 on enclosed inquiry slip ▲

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

▲ For more details circle NED-295 F4 on enclosed inquiry slip ▲

Dust-Eater

Parker Turbo-Sweep model for Quick, Cleaner Floor Maintenance

Revolutionary new design gives all the benefits of dust-free power sweeping . . . plus the traditional maneuverability, easy maintenance and low cost of Parker's other manual and motorized models.

Dust bag and trash hopper are easily emptied; hand-high controls adjust throttle, clutch, hopper and brush height. Handles dirt, trash, scraps—50,000 sq. ft. per hr. Optional riding sulky.

Ask for a free demonstration.

PARKER
INDUSTRIAL FLOOR SWEEPER
Manual . . . Motorized . . . Dust Control
Parker Sweeper Co., 36 Bechtle Ave., Springfield, Ohio

▲ For more details circle NED-296 F4 on enclosed inquiry slip ▲

OSTER **NO. 601 RAPIDUCTION**

NOW PRODUCES MORE THAN EVER with this new

Round bar capacity 1½"

The Oster No. 601 Rapiduction bar and chucking machine with new electric-powered carriage feed increases output . . . reduces operator fatigue . . . assures *consistent* quality.

Power feed is also available in a complete packaged unit for quick, easy installation on No. 601 machines now in use.

Write us for complete information, and the name of your nearest Oster Rapiduction Dealer.

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 East 61st St. • Cleveland 3, Ohio

Builders of High Quality Metal-Working Machinery Since 1893

▲ For more details circle NED-297 F4 on enclosed inquiry slip ▲

Truly Universal

Precision Dillon Tester may be used in TENSILE, COMPRESSION, TRANSVERSE or SHEAR testing with equal accuracy. Hand operated or motorized, will test any type material in flats, rounds or special shapes. Seven capacities from 0-250 lbs. up to 0-10,000 lbs. Fully portable. Has self-aligning grips, maximum hand, ball bearings. America's most popular low priced tester! 10 to 14 DAY DELIVERY. Write *today* for illustrated brochure and free Tensile Strength Computer.

Dillon

TENSILE TESTER

ENGINEERING SKILL AT ITS HIGHEST!

Sales Reps.: Some Territories Open. Write

W. C. DILLON & CO., INC. 14620NE Keswick St. Van Nuys, California (Suburb of Los Angeles)

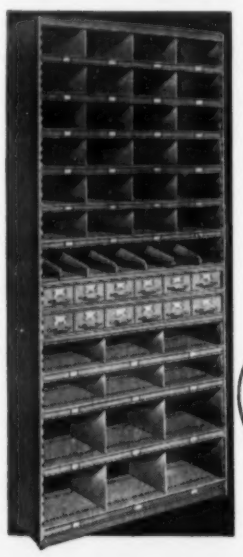
▲ For more details circle NED-298 F4 on enclosed inquiry slip ▲

Handicapped by obsolete bins?

BERGER'S NEW

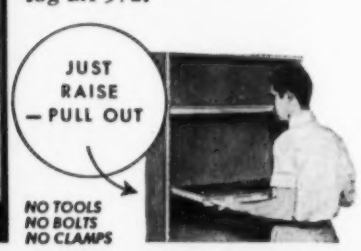
FLEXI-BILT BINS

rearrange quickly IN SECONDS!



This quick, easy shelf adjustment is an *exclusive feature.* It's the reason why Berger's Flexi-Bilt Parts Bin never becomes obsolete. Features strong, rigid all-steel construction, boltless bin dividers that slip easily into place. Over 100,000 possible shelf arrangements. No need for tools, bolts or clamps.

For complete information and specifications write for Catalog EA 972.



REPUBLIC STEEL CORPORATION

BERGER MANUFACTURING DIVISION

1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

▲ For more details circle NED-299 F4 on enclosed inquiry slip ▲

• How is your abrasive consumption? And what is maintenance costing you on your blast cleaning equipment?

If these two items constitute a skeleton in your blast cleaning closet it is time you heard the story of Controlled T chilled iron shot and grit.

Not only do you get rid of skeletons, but "Controlled T" *guarantees* you a 15% saving on your blast cleaning costs *regardless* of the price you may now be paying for chilled iron shot! The money you save on maintenance—on top of this—is all gravy for you—an extra dividend.

Get in touch with the Hickman, Williams office nearest you and ask for a free copy of "A Primer on the use of shot and grit."

National Controlled "T" Shot and Grit is Produced Exclusively by

THE NATIONAL METAL ABRASIVE CO. • Cleveland, Ohio

WESTERN METAL ABRASIVES CO. • Chicago Heights, Illinois

AND SOLD EXCLUSIVELY BY

HICKMAN, WILLIAMS & CO. (INCORPORATED)

CHICAGO • DETROIT • CINCINNATI • ST. LOUIS • NEW YORK

CLEVELAND • PHILADELPHIA • PITTSBURGH • INDIANAPOLIS

▲ For more details circle NED-300 F4 on enclosed inquiry slip ▲

CHROME ELECTROPLATER
for tools, cutters, wear parts

Use of a simplified plating process makes it possible for the Krome-King electroplater to chromium plate precision taps, reamers, gages, drills, punches and wear parts "right on the job." Such items can be uniformly and accurately plated to 0.0001-in. and returned to the job in a few minutes. Any desired depth can be deposited. Process produces either a soft, dull chrome at room temperature or a bright, hard, ductile chrome at 130° F. Latter type absorbs shock without chipping or peeling. Equipment consists of power unit and tank unit, both made in varying capacities to fit the job. Made by **National File Co.,** Dept. NEW, 532 N. Cedar St., Lansing, Mich.

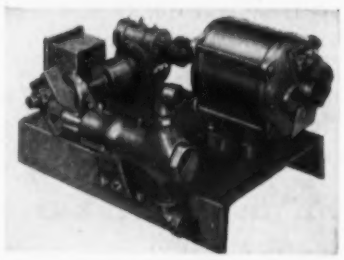
▲ For more details circle NED-301 F4 on enclosed inquiry slip ▲

POLAR RELAY
compact high speed unit

Sensitivity for high speed pulse repeating is feature of the PTW polar relay for use where low current is transmitted over long lines. No critical adjustments are necessary as spacing of contacts is by simple set screw adjustment. Relay has snap-on cover and can be used for line current direction indication or as differential relay in Wheatstone bridge type of control. Available from **Automatic Electric Sales Corp.,** 1001 W. Van Buren St., Chicago 7, Ill.

▲ For more details circle NED-302 F4 on enclosed inquiry slip ▲

CONTROLLED VOLUME PUMP
for use in proportional feed systems



Mechanical single revolution clutch incorporated in a motor driven controlled volume pump permits one stroke of the pump, in response to an electrical signal, to effect feed of an additive in proportion to the main line flow rate. Signal may be transmitted by a timer, electrical contacts on a positive displacement meter or other source. The pump for proportional feed systems has capacities from 1 pt to 1350 gph against discharge pressures up to 50,000 psi. Made by **Milton Roy Co.,** Station Q, 1300 E. Mermaid Lane, Philadelphia 18, Pa.

▲ For more details circle NED-303 F4 on enclosed inquiry slip ▲

STRAIN RELIEF!

New Industrial Pressure Switch Absorbs Pressure Surges On Hydraulic Systems

Quad Ring Seal (optional) Eliminates Oil Return Line

• Oil-tight enclosure. Explosion-resisting types also available.

• Long-life snap switch mechanism in non-carbon tracking melamine case. 1 N.O. and 1 N.C. contact.

• Range locking nut • Easily adjustable • Dry seal pipe threads.

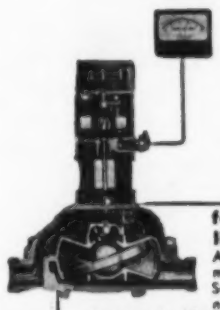
Write for Bulletin 9012 ADW. Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin

SQUARE D COMPANY

▲ For more details circle NED-304 F4 on enclosed inquiry slip ▲

viscosities unlimited

HAYS VERIFLOW METER AND HAYS ELECTRONIC VERITROL
indicate and control liquid flow



Now virtually all fluids can be precisely measured and controlled—*from a remote position.*

Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks. With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL controls the flow of liquid at that set-rate. *Send for Pub. No. 53-766-38.*

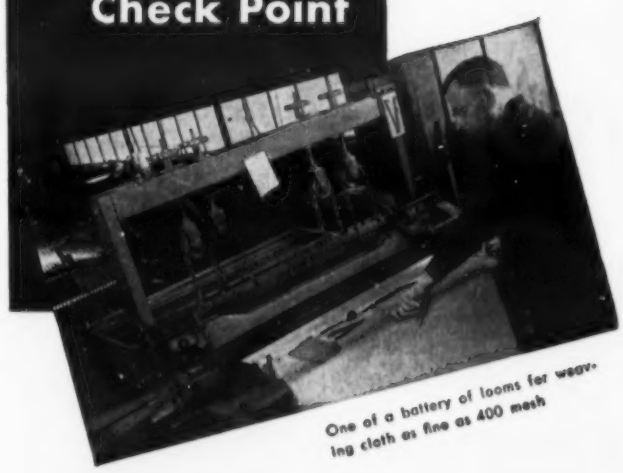
for corrosive liquids
Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others.

THE hays CORPORATION

Michigan City 15, Indiana

▲ For more details circle NED-305 F4 on enclosed inquiry slip ▲

An Important Wire Cloth Check Point



One of a battery of looms for weaving cloth as fine as 400 mesh

Weaving Precision

Our skilled workmen and precision looms combine to make precision wire cloth that meets the most rigid specifications. All shute wires are parallel and all warp wires are parallel as they must be, to assure a uniformly woven cloth with no defects. One or two open spots in a wire cloth could completely spoil the most painstaking screening operation.

In addition to its uniformity and freedom from imperfections, Newark Wire Cloth is noted for accurate mesh counts. Available in all the commercially used metals, Newark Wire Cloth is woven in sizes ranging from 4 inches (space cloth) down to 400 mesh.

We maintain a large stock of the commonly used metals and sizes, and are in a position to make prompt shipments. Let us quote on your requirements. When writing, please give us details on your process.

Send for our New Catalog E.

NEWARK for ACCURACY

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

▲ For more details circle NED-306 F4 on enclosed inquiry slip ▲

NOT THIS... BUT THIS

Now...for a good shower

—deep freeze!

—scalding hot!

BANISH "BOOBY TRAP" SHOWERS

Use POWERS THERMOSTATIC Water Mixers

Real comfort and safety. No waste of time or hot and cold water.

POWERS THERMOSTATIC WATER MIXERS

—eliminate shower accidents

They are completely automatic, hold shower temperature wherever you want it regardless of pressure or temperature changes in water supply lines. Failure of cold water instantly shuts off the shower.

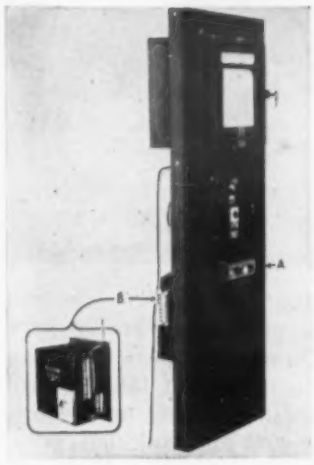
Tests prove Powers is safest shower regulator made for factories, schools, hospitals, hotels and clubs. Thousands now in use.

Used for Many Industrial Processes. Users report control within ½° F. Temperature Ranges: 65-115° F., 60-125° F., 75-175° F. Write for Bulletin 365. (b13)

THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in Over 50 Cities • Est. 1891

▲ For more details circle NED-307 F4 on enclosed inquiry slip ▲

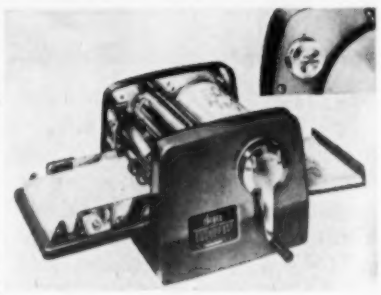
CIRCUIT RESTORER
for use in thermocouple circuits



Faults in thermocouple circuits which cause errors of pyrometer indication and control can be quickly checked and temporarily repaired by this thermocouple circuit restorer. Unit consists of power pack (B) and pushbutton station (A) which sends special pulse of electrical energy through the thermocouple circuit bridging the loose, corroded or defective joint. Reading then obtained is the true reading. Difference in reading before and after use of restorer indicates a fault. Device is available for manual or automatic operation and can be used on any kind of thermocouple wire. One unit serves many thermocouple circuits. Made by **Sherman Electric Co.**, 1808 Elm Rd. N. E., Warren, O.

▲ For more details circle NED-309 F4 on enclosed inquiry slip ▲

SPIRIT DUPLICATING MACHINE
improved, uses any paper stock



Improved Conqueror spirit duplicating machine can now print on any paper stock. Dial control with five settings meters spirit flow correctly for papers varying from lightweight newsprint stock to heavy card. Built-in lint eliminator protects wicks from clogging when machine is used with rough loose surface stocks. Other features include reset counter, visible fluid supply, adjustable pressure control, raise-and-lower control, rotary feed and positive master clamp. Machine prints in one to five colors at speeds up to 120 or more copies per minute and will take paper up to 9 x 14 in. Made by **Heyer Corp.**, 1890 S. Kostner Ave., Chicago 23, Ill.

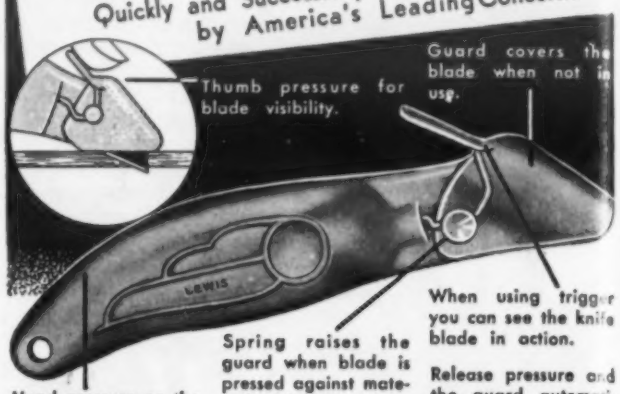
▲ For more details circle NED-310 F4 on enclosed inquiry slip ▲

DO YOU KNOW? Basic engineering principles involved in V-belt drive applications, installation and maintenance of multiple V-belt drives, and characteristics to check in selecting best type of drive for given applications are respective subjects of three 20-minute 35-mm sound slidefilms entitled "In Every V-Belt Drive," "For Better Driving," and "Selecting a Drive." Films are available from Allis-Chalmers Mfg. Co., General Machinery Div., Milwaukee 1, Wis.

▲ For more details circle NED-311 F4 on enclosed inquiry slip ▲

NEW! LEWIS AUTOMATIC TRIGGER ACTION SAFETY KNIFE

Quickly and Successfully Adopted for Use by America's Leading Concerns



No other cutting tool like it. Eliminates the hazards of exposed cutting blades. You must operate it to appreciate its swift and sharp cutting . . . always automatically ready for use. Trigger action gives full blade visibility with safety.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle NED-313 F4 on enclosed inquiry slip ▲

WESPO

T-BOLTS

BOLSTER & T-SLOT TYPES TO J.I.C. PRESS ROOM STANDARDS

Forged precision machined heat treated. Tensile strength 150,000 lbs.

SIZES
BOLSTER BOLTS
—dia. to 1½" Heads sq. to 3" hex. to 2⅝" T-Slot bolts, ½", ⅝", ¾" dia. lengths to 12". 1" dia. 4" to 22" long.

NUTS—
hardened—threaded to close fit.
WASHERS—hardened — ground both sides.

Write for bulletin-prices

WEST POINT MFG. CO.
26945 W. 7 Mile Road Detroit 19, Mich.

▲ For more details circle NED-314 F4 on enclosed inquiry slip ▲

If your answer is National Vulcanized Fibre—you're acquainted with perhaps the most remarkable of all materials. If you didn't know the answer—then you'll be pleasantly surprised to find out about this material of a million uses. Its unusual properties might be exactly what you're looking for!

what material is "light as a feather"... tough like iron?

National Vulcanized Fibre is half the weight of aluminum. For many mechanical purposes it's better and more durable than metal. Strong and resilient . . . it insulates, wears stubbornly, resists shock and abrasion. It can be machined, bent, formed, drawn, swaged. It has high dielectric strength, which adds to its versatility.

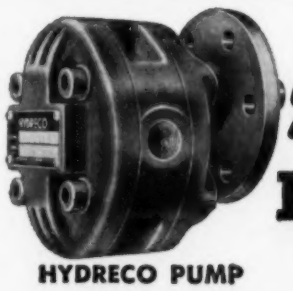
No other material possesses *all* the mechanical and electrical characteristics found in National Vulcanized Fibre! This material has been proved best for at least one of the parts in almost every electrical appliance and installation. It has countless mechanical applications, too. Almost every industry uses National Vulcanized Fibre. And new uses are constantly being discovered.

What about you? Need more specific information—help—or a catalog? Just write to address below, Dept. J-6.

• *National also manufactures Phenolite Laminated Plastic, Peerless Insulation, Vul-Cot Waste Baskets, and Materials Handling Equipment*

NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE
FIRST—IN MAKING THE MOST OF LAMINATED PLASTICS

▲ For more details circle NED-308 F4 on enclosed inquiry slip ▲



HYDRECO PUMP

Get the Facts on HYDRECO Oil Power!

WHAT KEEPS HYDRAULIC PUMPS AND MOTORS "ON THE JOB" DAY IN AND DAY OUT?...See Bulletin 139!

It takes more than pressures, speeds and capacities to keep equipment performing dependably, economically and when you want it. The invisible factors that do not appear in the specifications make the deciding difference in hydraulic controls. It is these PLUS factors that keep HYDRECO PUMPS and MOTORS on America's leading hydraulically-equipped Materials Handling, Earth Moving and Industrial Machinery.

HYDRECO MOTOR

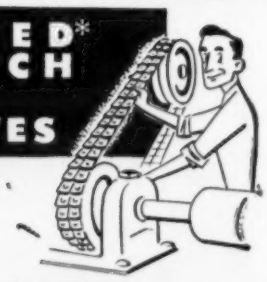
Write—

Bulletin No. 139 has the facts you want to know about HYDRECO Pumps and Motors.

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222nd STREET • CLEVELAND 17 • OHIO

▲ For more details circle NED-312 F4 on enclosed inquiry slip ▲

GUARANTEED* LESS STRETCH on all your V-BELT DRIVES



NEW IMPROVED BRAMMER RED

★ GREATER STRETCH RESISTANCE!
★ MORE PLIES IN EACH SIZE GIVES HIGHER POWER CAPACITY!
★ IMPROVED FLEXIBILITY!
★ GREATER RESISTANCE TO SHOCK FATIGUE, AND ABRASION!
★ MUCH LONGER LIFE!
ALL AT NO INCREASE IN COST!

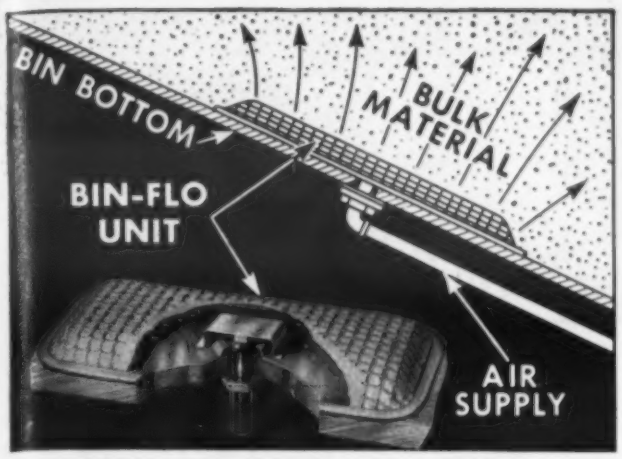
Write TODAY For Literature to:

*GUARANTEE

BRAMMER "Red" eliminates stretch problems. We GUARANTEE you will find our new, modern product offers greater stretch resistance than any other link V-belting you have ever used. Your money refunded in full if this statement is not found accurate.

BRAMMER CORPORATION
684 BROADWAY, NEW YORK 12, N.Y.

▲ For more details circle NED-315 F4 on enclosed inquiry slip ▲



BIN-FLO

USES SMALL VOLUME OF AIR AT LOW PRESSURE

KEEPS BULK MATERIALS MOVING

BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

BIN-DICATOR bin level indicator—"The Eyes of the Bin"—automatically reports levels of materials in storage; automatically controls filling machines; prevents waste.

NEW 20-PAGE BOOK FREE

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

For more details circle NED-316 F4 on enclosed inquiry slip

makes the Solid Arbor obsolete

CHAMPION E-X-P-A-N-D-I-N-G MANDRELS

The expanding sleeve, mounted on tapered arbor, expands automatically to fit the hole. Inserted by hand—no arbor press needed. Always an exact, positive, concentric fit. Locked by a single mallet blow. Unlocked the same way. CHAMPION Expanding Mandrels are used in machine shops around the world. Save time, cut production costs, whether the job calls for machining one piece or a thousand.

Precision Model has expansion range of .010". Available in regular sizes to fit holes from ½" to 3" diam. Holds work to tolerances of .0002" run-out. Guaranteed for precision grinding, turning and milling operations.

Standard Model maintains close tolerances, handles material of any length bore, hard or soft metals—from thin tubes and bushings to heavy castings and forgings. A set of fourteen will fit every hole from ½" to 9½" diam.

CHAMPION *Expanding Mandrels can be made in special shapes and sizes to fit any specifications. Quotations on request. Write for descriptive folder today.*

WESTERN TOOL & MFG. CO., INC.
Our 53rd Year • Dept. 29 • Springfield, Ohio

For more details circle NED-317 F4 on enclosed inquiry slip

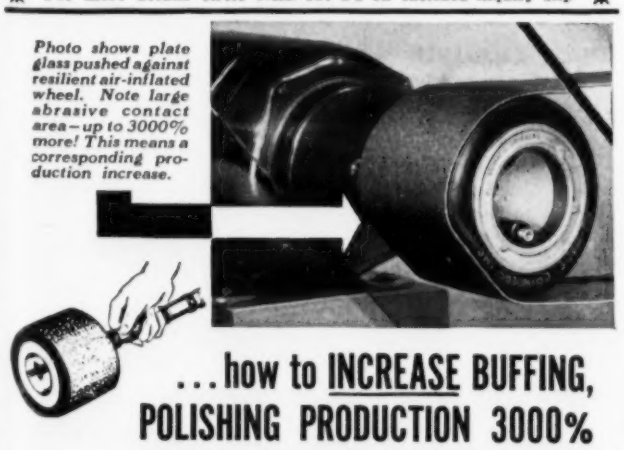


Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.

...how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

● You can boost your buffing and polishing output up to 3000% on flat work ...and 600 to 700% on contours...by using this resilient air-inflated wheel. Many other advantages such as—*no chatter or bounce... eliminates under-cuts... produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you. Nu-Matic Grinders, Inc., 8223 Carnegie Ave., Cleveland 3, Ohio.

send for full information TODAY!

NU-MATIC Air-Inflated GRINDERS

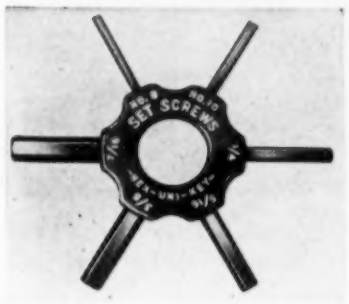
For more details circle NED-318 F4 on enclosed inquiry slip

PROPANE TORCH
for soldering, sweating, other jobs

"Bottled" propane gas is used as fuel for type P Torch-O-Matic pistol shaped torch for soldering, burning, sweating and other similar jobs. Trigger-type valve controls the flame from fine pinpoint to 6-in. blast. Fuel savings and safety are also built into the design, since flame snaps off when trigger pressure is released, and ignites instantly when trigger is squeezed. Made by **Velocity-Power Tool Co.**, 203 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-319 F4 on enclosed inquiry slip

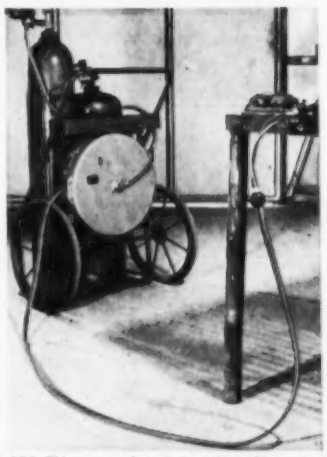
SOCKET SCREW WRENCH
six wrench sizes in one tool



Six of the most popular sizes of wrenches for hexagonal set or cap screws are provided by this Hex-Uni-Key. Wrenches fit set and cap screws in sizes of No. 8, No. 10, ¼, 5/16, ⅜ and 7/16-in. as well as cap screws in Nos. 4, 6, 8, 10, ¼ and 5/16-in. They are hardened and heat treated and are cast into circular holder with special anchoring feature. Made by **Eklind Tool & Mfg. Co.**, 2629 N. Western Ave., Chicago 47, Ill.

For more details circle NED-320 F4 on enclosed inquiry slip

WELDING HOSE REEL
holds 40 ft of ¼-in. dual hose



In a 21 x 27-in. space the model OA Weldreel welding hose reel will hold 50 ft of 3/16-in. or 40 ft of ¼-in. dual welding hose. Universal brackets enable it to be attached to wall, ceiling, floor or welding cart. For use indoors or out, the reel locks the hose at any desired length. Made by **United Specialty Corp.**, Dept. Q, P. O. Box 698, El Dorado, Ark.

For more details circle NED-321 F4 on enclosed inquiry slip

DO YOU HAVE
Your B&W Bulletin On Seamless or Welded Stainless Tubing

...for Structural and Architectural Applications?

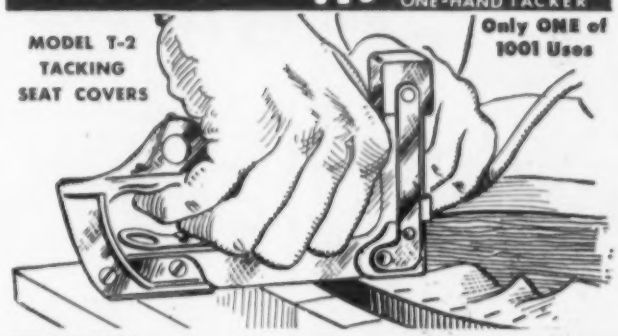
If not, send for it. It gives analyses and properties shapes, typical applications and advantages of B&W Stainless Tubing for the fabricator, architect and builder. Send for Bulletin TB-346.

TA-4052(LM)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

For more details circle NED-322 F4 on enclosed inquiry slip

YOU CAN DO IT AT LESS COST with HANSEN ONE-HAND TACKER



FASTER! With its zip-zip compound leverage action, Hansen saves time in all types of tacking and fastening. Fast, easy one-hand operation. Tacks fast as you grip. Leaves one hand free.

BETTER! Balanced design insures accurate, precision driving. Powerful action drives each staple firmly and neatly in place for improved quality and increased holding power. It is adaptable to a wide variety of uses — screens, insulation, TV wires, etc.

AT LESS COST! (MODEL T-3-4 HANSEN TACKER)

Hansen saves *time, steps,* and *materials* — operates faster — saves back-tracking — ready for instant, continual use.

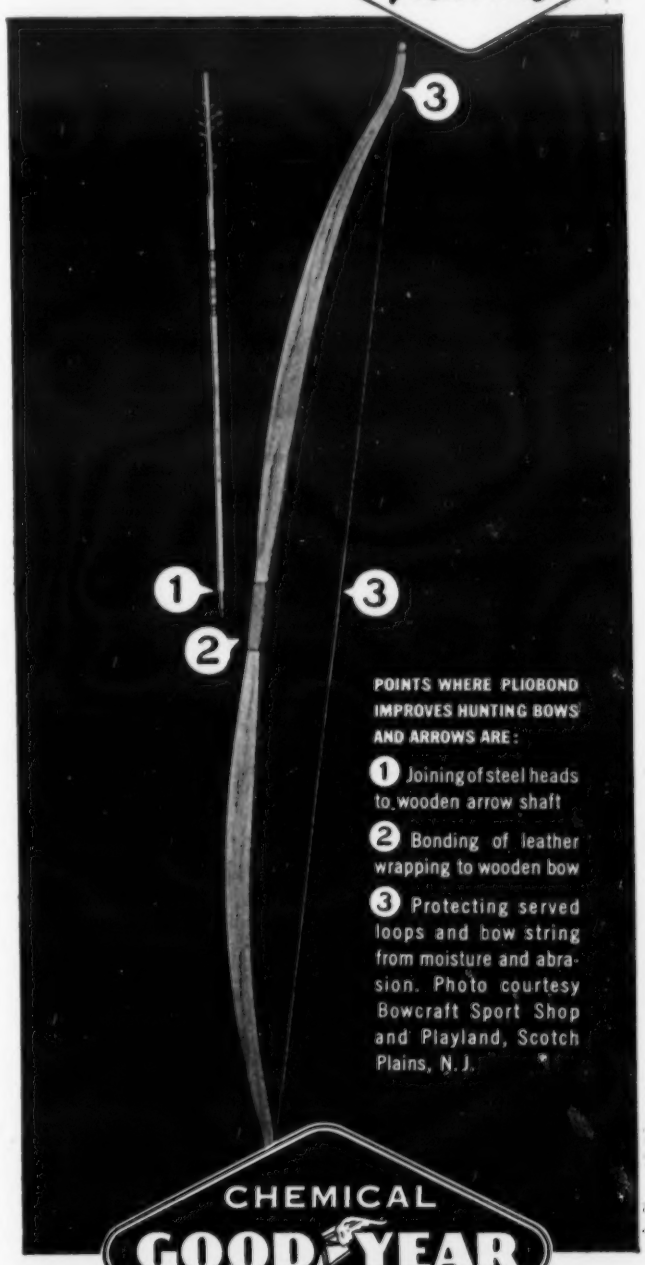
36 DIFFERENT MODELS
80 STAPLE SIZES

Request Booklet ...today

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

For more details circle NED-323 F4 on enclosed inquiry slip

Another Adhesive Problem Solved with Pliobond



CHEMICAL GOODYEAR DIVISION

Easier, Faster Assembly – is why Bowcraft Sport Shop uses PLIOBOND—the adhesive that "bonds anything to anything." Hot, hard-to-handle cement was formerly used to attach steel heads to hunting arrows. Production was low. Costs were high. Cold-applying PLIOBOND gives even stronger bond with much less trouble in much less time. It also firmly adheres leather to bow and helps prevent fraying of served loops and bow string. For more details on PLIOBOND, write Goodyear, Chemical Division, Akron 16, Ohio.

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-324 F4 on enclosed inquiry slip

LETS THE SUN IN — KEEPS OUT HEAT AND GLARE

"SHADE"

THE REVOLUTIONARY NEW PLASTIC SHEETING DOES ALL THREE AT AN AMAZING *Low Cost!*

A DOWN-TO-EARTH NEED FOR EVERY BUILDING WITH A WINDOW

Windows admit sunlight without glare when the glass is covered with "SHADE." "SHADE" is tough and strongly resistant to tearing, abrasion, scuffing, creasing and cracking; and also resists moisture, mould and mildew, oils, greases, alcohols and many chemicals. "SHADE" is permanent and washable and is custom-cut in our factory to your window sizes. May be used on exterior and interior. ORDER "SHADE" TODAY!

Tests prove "SHADE" increases efficiency by eliminating outside distractions and glare fatigue. "SHADE" is a specially formulated compound that filters the light yet COSTS A FRACTION OF OTHER INEFFECTIVE DEVICES.

NO MORE PAINTING
With "SHADE" you have an easily applied filter, bonded to the glass. It won't crack or grow brittle.

EASY TO APPLY
No special tools or skills required. Wet pre-cut "SHADE," place polished side to smooth glass only. Squeegee out excess water.

PERMANENT
"SHADE" will never come off until you pry up a corner and strip it off yourself.

WASHABLE
Can be washed down like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
1. Architectural Blue
2. Filtered White
3. Frosted Translucent
4. Olive Green Transparent
5. Light Green Translucent
6. Transparent Blue
7. Blackout Black

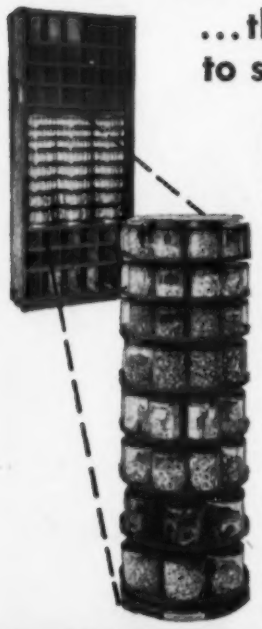
TRANSEAL, LTD.

Dept. NED, 100 Oak Tree Avenue, So. Plainfield, N. J.

▲ For more details circle NED-325 F4 on enclosed inquiry slip ▲

VU-O-MATIC!

...the modern answer to small parts storage



COMPACTNESS... visibility ... protection. That's the outstanding combination offered by Union Metal VU-O-MATIC rotary stands. Two to four times more small parts can be stored with this jar-tray development than in ordinary bins or drawers.

Jars mean quicker, faster visual location. No more wasted time searching through drawer after drawer. Parts stay clean and moisture-free indefinitely, eliminating pre-use cleaning. Freedom from corrosion is maintained for long periods of storage.

Folder MH-810 offers additional informative data on specifications, combinations, simplifying stock control and weight-count inventory. Write today to The Union Metal Manufacturing Co., Canton 5, Ohio, for your copy.

UNION METAL
Material Handling Equipment

▲ For more details circle NED-326 F4 on enclosed inquiry slip ▲

LOCATE GROUNDS *quickly* *with the* BRUNT FAULTFINDER

Find grounds in energized power circuits—FAST. The Brunt Faultfinder—$450, express prepaid—makes it a one-man job. Country's largest manufacturers use it to prevent costly work stoppages.

FAULTFINDER FEATURES
- Can be used in dark or noisy locations.
- Locates faults on ungrounded wiring systems up to 550 volts, a.c. or d.c.
- Traces pole line signals without climbing.
- Equally strong signal on open or enclosed wiring.
- No delicate meters or instruments to adjust.
- Small, compact, durable, easy to operate.

ORDER TODAY AS PREVENTIVE MAINTENANCE AGAINST SHUTDOWNS OR SEND FOR BOOKLET.

PARR MANUFACTURING CORP.
40 AUSTIN ST.
NEWARK 5, N. J.

Please send me your booklet "THE BRUNT FAULTFINDER."

NAME.....
TITLE.....
COMPANY.....
STREET.....
CITY.....ZONE.....STATE.....

▲ For more details circle NED-327 F4 on enclosed inquiry slip ▲

CALCULATING MACHINE DESK
is single pedestal type

Single pedestal calculating machine desk has a 60 x 30-in. working surface and is available in right and left-handed models. Concealed center drawer is fitted in the top and a box drawer and a letter-size drawer in the pedestal. Linoleum top covering is available in blond tan or mist green shades and standard enamel finishes are platinum gray, neutral green, walnut and mahogany grain. Desk is also available without pedestal, this design having a 50 x 30-in. top. Made by **Republic Steel Corp.**, Berger Mfg. Div., 1000 Belden Ave. N. E., Canton 5, O.

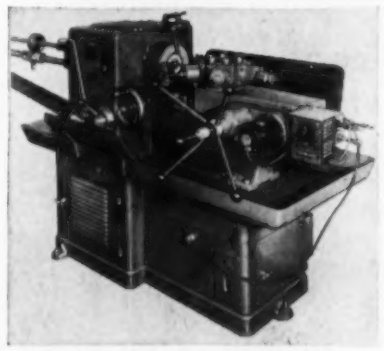
▲ For more details circle NED-328 F4 on enclosed inquiry slip ▲

TOOL ROOM CLAMP
rapid adjustment is featured

Rapid adjustment for size is feature of this tool room clamp. Both T-bolt and clamp rest are serrated for adjustment to work height, and adaptors for vertical angle plate clamping are available. Clamp body is a heat-treated forging. Wide range of sizes is available. Made by **Hi-Lo Mfg. Co.**, Dept. 14, 18525 Weaver Ave., Detroit 28, Mich.

▲ For more details circle NED-329 F4 on enclosed inquiry slip ▲

LATHE CARRIAGE FEED
packaged unit has independent motor



Packaged electric power feed is designed for Rapiduction and other turret lathe carriages and consists of an independent 1/15-hp motor driving through spur gear reduction to carriage rack pinion. Motor armature voltage is regulated to govern rate of feed. A limit switch cuts out the drive when carriage comes within 1/16-in. of carriage stop. Stops are set in normal manner. Drive can also be disengaged for manual carriage operation. Rates of feed range from 1.40 to 20 ipm, are set by control knob and are shown on graduated plate. Made by **Oster Mfg. Co.**, 2066 East 61st Pl., Cleveland 3, O.

▲ For more details circle NED-330 F4 on enclosed inquiry slip ▲

AIR POWER BUILT FOR YOUR NEEDS

WAYNE *Job-Engineered* COMPRESSORS

NAME YOUR air requirements—we'll apply the Wayne Air Compressor to the job. Your air capacity, air pressure, horsepower and other requirements are related to one of the Wayne complete line of single- and two-stage compressors, high- and low-pressure types, horizontal and vertical models, sizes from fractional to 10 hp.

Wayne gives you pre-tested, guaranteed, full-rated air power—not just a theoretical displacement rating—for each recommended compressor. All this, plus longer-service automotive-type pistons, the Wayne "wear-guard" constant-level lubrication, and extra cooling capacity. Write today for data on "How to Select an Air Compressor."

THE WAYNE PUMP COMPANY
SALISBURY, MARYLAND
TORONTO, CANADA

▲ For more details circle NED-331 F4 on enclosed inquiry slip ▲

with....
CONE-DRIVE double-enveloping Worm Gear Speed Reducers!

'Double-enveloping'—wrapping worm and gear around each other—is the secret of Cone-Drive gear's compactness.

As a result, smaller gears can be used to carry a load when you specify Cone-Drive gears—up to ½ smaller housings, too.

If space saving is a design need, it will pay you to look into Cone-Drive gears and reducers . . . NOW.

Ask for Bulletin 8901-50

CONE-DRIVE GEARS
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
Division Michigan Tool Company
7171 E. McNichols Road • Detroit 12, Michigan

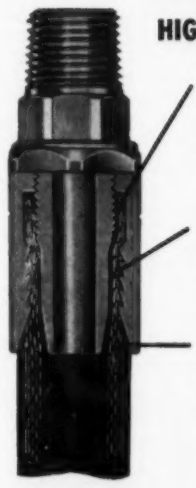
▲ For more details circle NED-332 F4 on enclosed inquiry slip ▲

SAVE MONEY

with TOP QUALITY, LONGER-LASTING

Norgren HOSE ASSEMBLIES

HIGH PRESSURE REUSABLE COUPLING



LOCK POINT
Special design of coupling expands and locks hose into this chamber—assuring tight, non-slip fitting.

SEAL POINT
Tight seal and heavy wall eliminates loss of compression under extreme usage.

FLEX POINT
Special design relieves tension at flexing point—results in longer hose assembly life.

BURST CHAMBER TESTS

hose assemblies to destruction, using pressures up to 30,000 psi. Norgren Couplings are designed to withstand burst pressure of hose furnished.

Norgren Hose Assemblies available with permanent or re-usable couplings for high, medium and low pressure air and hydraulic service. Sizes: ¼" to 1½" I.D. in permanent types; ¼" to 1" in re-usable types. Also a complete line of couplings, stems and fittings.

Pioneer and Leader in Oil-Fog Lubrication for 26 Years

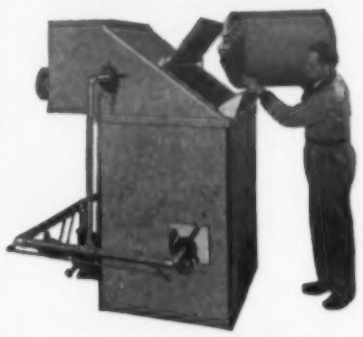
WRITE FOR CATALOG SHEETS

C. A. Norgren CO.
3405 SO. ELATI ST., ENGLEWOOD, COLO.

VALVES • FILTERS
REGULATORS • LUBRICATORS • HOSE ASSEMBLIES

▲ For more details circle NED-333 F4 on enclosed inquiry slip ▲

NEW WINNEN INCINERATOR
is smokeless . . . odorless . . . pays for itself in less than a year!



The New Wincinator C-2-20
Note extra-size feed doors

Now Winnen Incinerators are available in an additional line . . . the Model C-2. Downdraft in design, it is smokeless and odorless. Made in 10, 15 and 20 bushel sizes, the C-2 conforms to the most rigorous building codes everywhere. It's designed to burn wet and dry refuse without smoke or odor.

Fuel is pressurized to multiple burners for both primary and secondary combustion. Thoroughly tested while burning fish, rubber, etc. Available with a choice of fuels. Wincinators are so well designed that they consume all burnable material to a fine white ash. Available without any fuel for burning dry refuse only.

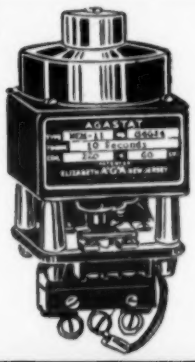
Thousands of satisfied users tell us their Wincinators saved garbage and refuse hauling charges . . . paid for themselves in less than a year! Operating costs are surprisingly low. Fuel and power are used only when needed since an automatic timer (optional equipment) controls operation during preselected intervals. Completely equipped with latest safety devices. Automatic fuel controls, prefab chimney and other optional equipment are also available.

Wincinators are shipped knocked down, direct from factory with complete easy to follow instructions for installing. Any handyman can install in about five hours! No brickwork or masonry needed. Easy to relocate later if you wish. Guaranteed against defective parts for 90 days.

Send for new folder, prices and information. No obligation. Use inquiry card, or write today to **The Winnen Incinerator Co.**, 932 Broadway, Bedford 10, Ohio. *Advt.*

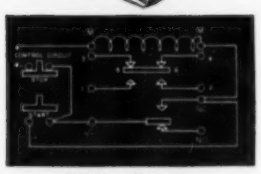
▲ For more details circle **NED-334 F4** on enclosed inquiry slip ▲

NEW!



AGASTAT
Trademark

TIME DELAY RELAYS
with Remote Push Button Control



Wiring diagram
NEH-11 AGASTAT

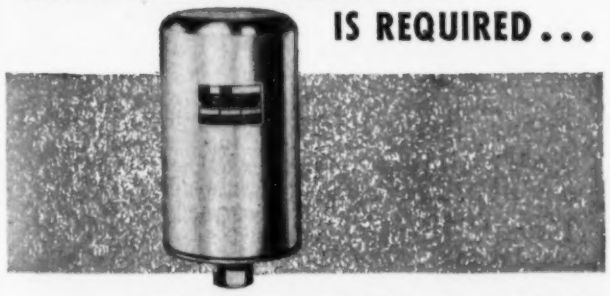
An auxiliary "hold-in" switch affixed to the bottom of these pneumatic relays makes possible a remote push button control of the time delay. Delays easily adjustable from 0.1 second to 10 or more minutes. A.C. and D.C. units, single or double break contacts. All are lightweight, compact, easily mounted and low in cost.

Write for specifications—and ask our application engineers for help with your timing problem. Address Dept. **A9-65.**

AGA DIVISION ELASTIC STOP NUT CORPORATION OF AMERICA
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing

▲ For more details circle **NED-335 F4** on enclosed inquiry slip ▲

WHEN REPEAT SENSITIVITY IS REQUIRED . . .



. . . SPECIFY THE *UNITED ELECTRIC* TYPE G9 PRESSURE-VACUUM CONTROL

The Type G9 Pressure-Vacuum Control is designed for applications requiring uniform on-off differential between .2" and 10" WC. It is a highly sensitive, precision-built unit with internal or external, calibrated or uncalibrated adjustment. It is watertight unless the adjustment is external.

Switch Ratings: The load-carrying capacity of the switch is directly proportionate to the switch differential. Load ranges from 1 to 15 amp. at 115/230 V., A.C.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

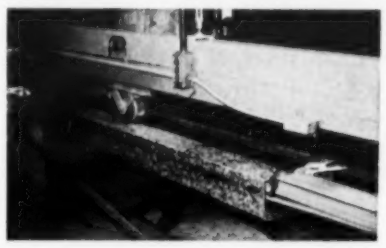
▲ For more details circle **NED-336 F4** on enclosed inquiry slip ▲

FOOT-OPERATED SHEAR
cuts 36 in. of 18-gage mild steel

Wide holddown incorporated in the Frecut foot-operated shear makes accurate shearing of 18-gage mild steel possible in lengths up to 36 in. Improvements include correct leverage for capacity cutting with minimum operator fatigue, and front, rear and angle gages as standard equipment. Shear weighs approximately 640 lb. Made by **Frederick Iron & Steel, Inc.**, Machinery Div., E. Seventh St., Frederick, Md.

▲ For more details circle **NED-337 F4** on enclosed inquiry slip ▲

GROOVING MACHINE
for sheet metal working



Precision sheet metal grooving machine is heavy-duty unit which can be used for production or one-of-a-kind work. It will groove up to 300 ft of sheet metal per hour, and has a maximum capacity in thickness of 18 gage. It generates a smooth, completely airtight seam without hand hammering. Made by **B. & J. Jacobs Co.**, Dept. C, 1725-31 John St., Cincinnati 14, O.

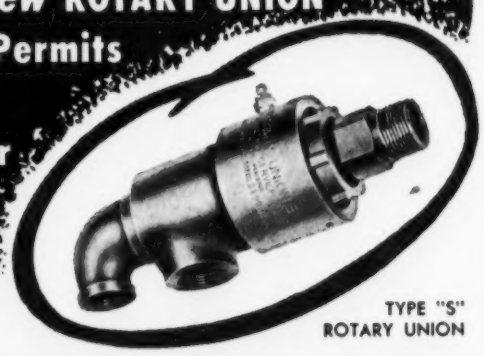
▲ For more details circle **NED-338 F4** on enclosed inquiry slip ▲

FORK TRUCK ATTACHMENT
for carton handling and storage

Overhead carton clamp and side shifter attachment for Lewis-Shepard electric fork trucks facilitates storage and handling of cartons in warehousing and car loading operations. Cartons rest directly on small lower shelf of attachment and are firmly clamped by an overhead rubber-lined arm. Safety interlock prevents clamping unless carton is correctly positioned. Attachment can be moved 4 in. either side of center so that carton can be placed exactly without maneuvering truck. All operations are hydraulically controlled from driver's seat. Made by **Lewis-Shepard Products, Inc.**, Dept. R-42, 125 Walnut St., Watertown 72, Mass.

▲ For more details circle **NED-339 F4** on enclosed inquiry slip ▲

Here It Is! The *New* ROTARY UNION* That Permits Field Repair



TYPE "S"
ROTARY UNION

All Past Advantages: This new Field Repair ROTARY UNION has all of the advantages of former models. It is self-aligning, self-adjusting, and will give you the same long trouble-free service which has made the ROTARY UNION the favorite of mill men.

Plus Field Repair: Now you can repair ROTARY UNIONS in your own shop. Any ordinary mechanic can do this in a few minutes with standard maintenance tools.

Former Models Are Convertible: A simple conversion kit enables you to quickly convert former models into field repair units.

Contact our nearest office for full details or write Dept. 6D for our new catalog.

*Trade Name

"Where *Good Connections* Count"®

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N.C.
(Home Office & Factory)

Atlanta
Chicago
Cleveland
Providence
New York
Montreal
Toronto

▲ For more details circle **NED-340 F4** on enclosed inquiry slip ▲

and Now TWO NEW 1 and 1½ hp Variac® *Motor Speed Controls*

With all of the advantages of the popular fractional horsepower models, these new, larger units have conventional pushbutton start-stop-reverse boxes and a separate VARIAC speed control for convenient mounting in any location.

FEATURES: No electronic tubes—no warm-up required; Extra-wide speed range—0 to rated or higher; High starting torque; Compact cabinet mounting; Easy maintenance; Simple installation.

Write for the VARIAC® Motor Speed Control Bulletin for information on all nine models with ratings from 1/15th hp or less, and up.

Type 1704-A (1 hp): $470
Type 1705-A (1½ hp illustrated): $495

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass
90 West St. NEW YORK 6 920 South Michigan Ave. CHICAGO 5
1000 North Seward St. LOS ANGELES 38

▲ For more details circle **NED-341 F4** on enclosed inquiry slip ▲

It should have been protected with S.S.White PLASTIC SHIPPING PLUGS and CAPS

Careless handling can damage unprotected threads of expensive equipment — dust or moisture inside inadequately sealed openings may ruin delicate operating mechanisms. These are common—and costly—hazards during shipment, maintenance and storage. They can cost thousands of dollars in repair and service work.

It pays to protect your valuable parts—especially when you can do it so easily and at *such low cost* with S.S.White plastic shipping plugs and caps. Screwed over threaded studs or into tapped holes, these inexpensive caps and plugs prevent damaged threads—keep out dirt and moisture—cushion exposed fittings from damage — or seal in oil or hydraulic fluids.

Make sure your production, shipping and maintenance departments have an adequate supply on hand.

WRITE FOR BULLETIN P-5203
It gives details on the range of sizes, shapes and types available. Send for a copy.

THE S.S.White PLASTICS DIVISION
DENTAL MFG. CO. Dept. 7P, 10 East 40th St. NEW YORK 16, N. Y.
Western District Office • Times Building, Long Beach, California

▲ For more details circle **NED-342 F4** on enclosed inquiry slip ▲

A Complete Bushing Guide

FOR YOUR ENGINEERING AND PURCHASING FILES

Everything you need to know about Drill Jig Bushings. This catalog pictures and describes A.S.A. standard bushings. Gives helpful suggestions to purchasers and designers, lists hundreds of Ex-Cell-O bushings available from stock. Makes ordering quick and easy.

Write Ex-Cell-O for this Bushing Guide—as many as you'll need.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

54-19 XLO EX-CELL-O for PRECISION

▲ For more details circle NED-343 F4 on enclosed inquiry slip ▲

General Plate TRUFLEX®

THERMOSTAT METALS

Fit Into Your Product Picture

for Temperature Reaction, Accurate Performance and Economy!

General Plate *Truflex* Thermostat Metals and Fabricated Assemblies can cut your costs and give you reliable performance in your products requiring temperature control, indication or compensation.

Advanced General Plate production methods coupled with the best equipment available insure positive consistency in thermal and mechanical performance, and in maintaining close dimensional tolerances, hardness, etc. Every lot, whether it is 10 or 10,000, is a duplicate of the original, thus eliminating rejects and costly adjustments in assembly.

General Plate *Truflex* fabricated assemblies are engineered and manufactured to your specifications, ready for installation into your products. They eliminate costly fabrication problems . . . needless special equipment costs . . . experimental and assembly adjustments.

For you who desire to manufacture your own parts, *Truflex* Thermostat Metals are available as strip in coils or flat cut lengths.

It will pay you to investigate General Plate Truflex Thermostat Metals for your requirements. Write for engineering assistance and catalog.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
86 FOREST ST., ATTLEBORO, MASS.

▲ For more details circle NED-344 F4 on enclosed inquiry slip ▲

GET ANY BRAZING OUTPUT YOU WANT WITH *EASY-FLO*
SILVER BRAZING ALLOYS

It's easy. Here's the formula.

1. Assemble parts for brazing with alloy *preplaced* at the joints.
2. Use a fast heating method such as oxyacetylene torch, gas-air burners, electrical induction furnace, etc.
3. Plan a set-up that will keep assemblies moving to and through the heating station.

Above—Brass valve and cap of fire extinguisher with 9/16" square of .005" EASY-FLO 35 that joins them.

At left — close-up of burner station.

Below — turntable and gas-air burner brazing set-up.

AND HERE'S A TYPICAL EXAMPLE

One operator puts caps on turntable and alloy squares on caps. Other operator applies Handy Flux and sets valves on top of alloy. Output—one every 5 seconds—720 per hour. Unskilled labor does it.

Photos courtesy of Salkover Metal Processing of New York, Inc.

GET THE FULL STORY IN BULLETIN 20

It gives details about EASY-FLO forms for preplacement and fast heating and production methods. It's full of helpful information. Write for a copy.

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

▲ For more details circle NED-345 F4 on enclosed inquiry slip ▲

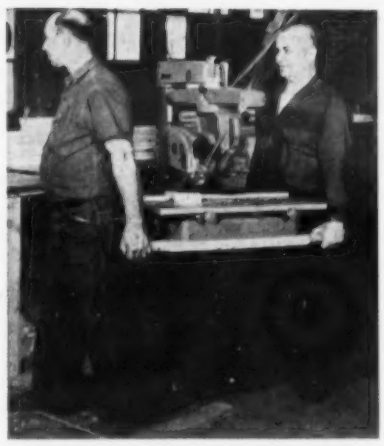
BELT-POLISHING UNIT
mounted on single base, adjust for standing or sitting position

Contact wheel, idler wheel and drive motor of the Space Saver belt-polishing unit are adjustably mounted on single base, permitting operator to change working stance from sitting to standing position. Working area freedom around contact wheel allows polishing awkward and irregular work pieces. Machine uses standard 132-in. belt with variety of contact wheel sizes. Wheel diameters from 4 to 18 in. can be used on machine without changing surface speeds or belt size.

Contact wheel is in reality an idler wheel, and belt is pulled by motor located at rear of machine. Operator can reverse belt direction at full speed without danger of belt slipping off wheels. Contact wheels can be changed instantly since they are integrally mounted on spindles which fit into a taper lock. Electric motor is G-E Tri-Clad 8558 totally-enclosed, fan-cooled type sealed in cast-iron housing. Made by **Stephen Bader & Co.**, Dept. NEB, Rockville Center, N. Y.

▲ For more details circle NED-346 F4 on enclosed inquiry slip ▲

RADIAL SAW
is 10-in. portable model



Weighing only 243 lb, this Delta 10-in. radial saw can be moved from department to department by two men using detachable wooden handles. It will crosscut full 16 in. in 1-in. stock and rip to the center of a 48-in. panel. One-piece retractable blade guard is safety feature. Saw can be used for horizontal end cutting, bevel ploughing, radial routing, mass cut-off, double and single miter cuts and various other operations. It has a 22 x 30-in. table and choice of 1-hp single-phase or 1½ hp three-phase motor. Dado capacity is ⅝-in. and miter capacity right or left is 0 to 90 degrees. Cutting unit rides on ball bearing rollers. Made by **Rockwell Mfg. Co.**, Delta Power Tool Div., Dept. HD-H31, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-347 F4 on enclosed inquiry slip ▲

ARCCO... NOW

OFFERS 8 DAY CHARTS and ROCKWELL CHART DRIVES

EIGHT-DAY ARCCO CHARTS are now available for use on practically all Rockwell-Emco, Foxboro and Westcott orifice meters. Eight day charts for other instruments soon available.

With this NEW Chart Drive 11 rotation speeds are possible. Turrets are available for 2, 3, 4, 6, 8 and 12 hours, also for 2, 3, 7, and 8 day rotation. Standard hub gives 24 hour rotation.

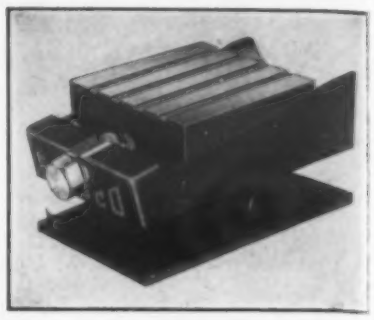
ROCKWELL CHART DRIVES are ruggedly built and are sealed for years of trouble-free service. The drives are adaptable to practically every type of instrument using circular charts. The price is $11.55 each. Turrets are $3.85 each F.O.B. Los Angeles Calif. or Tulsa, Oklahoma.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

SEND FOR DRIVE AND CHART BULLETIN

▲ For more details circle NED-348 F4 on enclosed inquiry slip ▲

IMPROVED MACHINE LEVELING JACK
is 50% stronger yet lower in height.



Engineering improvements have made this Jack 50% stronger yet lower in height. This was accomplished by redesigning the Empco Jack so that the adjusting screw always remains cradled in the assembly. This insures full bearing of either front or back collar at any stage of operation.

Once the machine is set on Empco Jacks, the simple turning of adjusting screw, with a hand wrench will lower or raise the machine until your level indicator reads "zero". With this feature, periodic machine leveling can be done in a matter of minutes.

To reduce vibration, Vi-Sorb Mounting Pads are available with each style Empco Jack. These pads substantially reduce vibration, the percentage of reduction usually depends upon the thickness of the pad that is used.

Level machine installations with periodical re-leveling is essential to lower costs of machine maintenance. These costs are further reduced by the use of Vi-Sorb Mounting pads under every Empco Leveling Jack.

Available in three styles: JC-1 (standard) and JC-2 (heavy duty) pictured here, and the newest style JS particularly designed for use with anchor bolts. Many models in all styles with minimum height ranging from 1⅞" to 4".

For complete specifications and prices write the **Enterprise Machine Parts Corporation,** 2727 Jerome Ave., Detroit 12, Michigan. *Advt.*

▲ For more details circle NED-349 F4 on enclosed inquiry slip ▲

. . . for less than you can yourself!

Our plants produce over 10 million small precision pieces every day—in the temper, hardness and micro-finish our customers require—to tolerances in tenths. What's more, we can make them *faster, better, and for less* than you can yourself.

Let us quote on your requirements. A letter outlining your needs plus a sample part or blueprint will receive prompt attention. If you desire more information, we'll be glad to send our Condensed Catalogue which illustrates many more of the parts we can produce quickly and economically.

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

▲ For more details circle NED-350 F4 on enclosed inquiry slip ▲

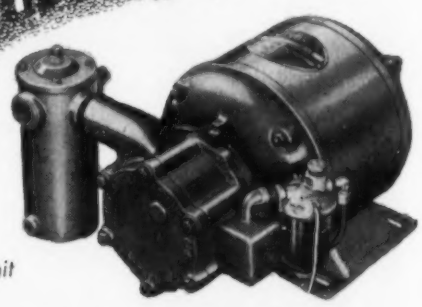
"Canton"
THE LOW COST CRANE with a HUNDRED USES

Just one of a hundred lifting and transporting jobs made easy with a CANTON Portable Crane. Loads up to 3 tons can be moved anywhere in the shop by one man.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle NED-351 F4 on enclosed inquiry slip ▲

MOTOAIR VACUUM PUMP



COMPACT!

motor and pump in ONE integral unit

Extremely compact design makes Motoair ideal for any machines where sustained or intermittent vacuum is required—also for Laboratory work. Visible, automatic, circulating lubricating system. Made in several sizes.

823. Send for Catalog details . . .

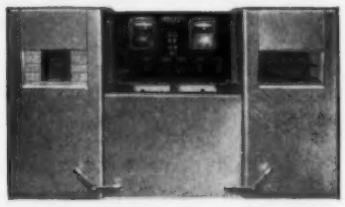
NEW JERSEY MACHINE Corporation
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

▲ For more details circle NED-352 F4 on enclosed inquiry slip ▲

OWN YOUR OWN HEAT-TREATING PLANT

low in cost
high in productivity
compact in design

here it is in a single unit



Features include:

1. Heating Furnace with range of 1000° to 2400° F. automatically controlled (12" wide x 10" high x 18" deep).
2. Tempering or Drawing Oven is recirculating type. Work is constantly bathed with evenly distributed high velocity and held to constant temperature by automatic control. Alloy steel lined with perforated shelf, has range of 250° to 1100° F. (21" wide x 10" high x 18" deep).
3. Furnace and Oven doors equipped with foot treadles.
4. Two Quench Tanks for oil and water. By means of double wall construction, oil tank is entirely surrounded by water for cooling oil, thus producing more uniform quenching.
5. Automatic electronic type controls.
6. Shipped ready to install by simply connecting gas and electric power line.

A complete line of WALTZ standard or special heat-treating furnaces, using all types of fuels are built to suit your requirements. Write Dept. B for comprehensive illustrated bulletins.

Waltz FURNACE COMPANY
SYMMES STREET • CINCINNATI, OHIO

▲ For more details circle NED-353 F4 on enclosed inquiry slip ▲

BARREL DUMPER
lift capacity is 1800 lb

Any size and type barrel can be lifted and dumped by the Moto - Truc barrel dumper which has lift capacity of 1800 lb and maximum lift height of 4 ft. Chain clamp on side of unit is adjustable to specific height of barrel. Unit's walkie-type design affords minimum turning radius and allows moving close to vat or hopper. It has two speeds forward and backward within 2½ to 3 mph. Powered by 12-v battery, power unit has roller grip controls and pushbutton hydraulic lift system. Dead-man controls are standard with automotive type brake applied to drive wheel. Made by **Moto-Truc Co.**, 1961 E. 59th St., Cleveland 3, O.

▲ For more details circle NED-354 F4 on enclosed inquiry slip ▲

HYDRAULIC LOADER & CRANE
with handling, loading versatility are powered by Case diesel tractors

Fast lifting and loading ability, plus long reach and quick dumping action make the Harrison Loader a versatile unit for stockpiling, earth or sand moving and truck loading operations. Unit shown is powered by Case model DI diesel tractor and uses either fork lifts or ¾-cu yd capacity bucket. Lifting capacity is 6000 lb. Four double-action hydraulic cylinders give fast control of lifting and dumping. Clearance under bucket in raised position is 9 ft 10 in., and dumping clearance is 8 ft 3 in.

Maneuverability and counter-weighted stability are features of Harrison Loader Crane which is mounted on Case LAI diesel industrial tractor. High lift allows crane to clear retaining bars on trucks being loaded, and long reach facilitates placing loads on far side of gondola cars. Hydraulic cylinders operating boom hoist are 28,000-lb capacity, while those operating boom are 10,000-lb capacity. Crane is equipped with swivel for hanging slings. Loader and crane are made by **Harrison Mfg. Co.**, Dept. D, P. O. Box 682, Columbia, S. C.

▲ For more details circle NED-355 F4 on enclosed inquiry slip ▲

production all gummed up...?

...see what a difference AVERY Kum Kleen LABELS will make ...they're pressure-sensitive!

■ Self-adhesive Avery Labels are quick, clean and neat... there's no mess, no fuss, no sticky fingers. Combined with patented Avery dispensers, they'll speed and simplify your labeling—and production! They're laid right on your product—*without moistening.* They'll put your trade mark on that hard-to-label surface...put a warning sticker or wiring diagram on your product or any clean, smooth spot. For inspection stickers...color coding...guarantees—they'll really speed production, packaging or any labeling or marking job!

■ Available in sheets or rolls...in any size, shape or color. Write for case histories and FREE SAMPLES—*today!*

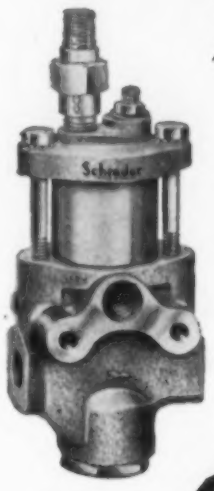
AVERY ADHESIVE LABEL CORP., custom div. 102
117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 S. California Ave., Monrovia, Calif. • Offices in other Principal Cities

☐ Send us case histories & free samples
☐ Tell us about your dispensers
☐ Have the Avery Label man call

Name
Company
Address
City State

▲ For more details circle NED-356 F4 on enclosed inquiry slip ▲

Schrader Pilot Valves for Remote Control of Air Systems



From any convenient spot, you can actuate air equipment by means of a Schrader Pilot Valve. Simply install in the main supply line at the point of operation, and add a small actuating valve at the point of control.

Pilot valves are available in two- three- or four-way types, and can be supplied with timers to deliver air from a fraction of a second to as many as desired.

The Schrader catalog gives complete information on pilot valves, as well as the full Schrader line of air operated products. Write for it today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-44, Brooklyn 38, N. Y.

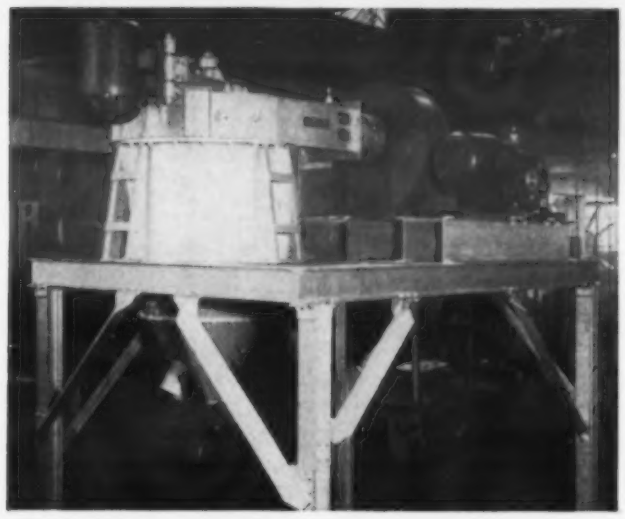
▲ For more details circle NED-357 F4 on enclosed inquiry slip ▲

MERRILL MATERIALS HANDLING DEVICES

3-M-1

MERRILL BROTHERS
56-13 ARNOLD AVENUE
MASPETH, N. Y.

▲ For more details circle NED-358 F4 on enclosed inquiry slip ▲



New Type STURTEVANT Air Separator
Recovers Fines in Micron Ranges

Now the famous Sturtevant Whirlwind Air Separator, so widely used throughout industry for fast recovery of fines, has been specially designed to "pick-off" classified materials such as pigments, limestone fillers, plastics, oyster shells, etc., in micron sizes.

These highly efficient air separators select a continuously uniform product of desired fineness. Used in a closed circuit with grinding mills, they increase production, cut power costs.

Large feed opening, rugged construction, ease of adjustment, low power consumption assure economy of operation and minimum upkeep. Write for further information.

STURTEVANT MILL COMPANY
114 Clayton St., Boston 22, Mass.

▲ For more details circle NED-359 F4 on enclosed inquiry slip ▲

NOW! . . . a standard, low-cost heat exchanger tailored to your individual needs

You can now have the advantages of a custom-built heat exchanger at lower cost. Custom design features, never before available at competitive prices, are now built right into standard Pfaudler stainless steel heat exchangers.

Nozzles, for example, can be of any size and in any position. They can be either flanged or threaded. And you can select the most efficient combination of length and diameter for any given heat transfer area.

OUR NEW *FLEXIBLE STANDARDS* PROGRAM makes these tremendous savings possible. A wide range of tube sheets, bonnets, nozzles, tubes, baffles and other parts are carried in stock—ready for immediate assembly to your specifications. This system helps to speed deliveries, too.

RANGE OF LINE—The flexible standards program applies to fixed tube sheet, single or multi-pass, tube and/or shell side stainless steel units in diameters up to 10". In addition, Pfaudler heat exchangers are available with shell diameters from 4" to 24" in four basic types of construction . . . fixed tube sheet condenser, outside packed floating head design with removable tube bundle and shell, "U" tube construction with removable bundle.

TO SAVE YOU TIME ON HEAT EXCHANGER CALCULATIONS, this 40-page, fact-packed Pfaudler manual contains all the data you need to work out heat exchanger type and capacity problems. Easy-to-follow tables, curves and charts plus full details on Pfaudler heat exchangers. Mail the coupon for your copy.

Pfaudler

ENGINEERS AND FABRICATORS OF CORROSION-RESISTANT PROCESS EQUIPMENT

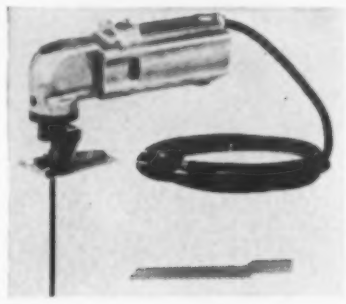
GLASSED STEEL — Hastelloy • Aluminum • Tantalum • Teflon
Carbon Steel • Solid or Clad Stainless Steel
Nickel • Inconel • Monel

THE PFAUDLER CO., Dept. NED 6, Rochester 3, N. Y.
Please send me the Pfaudler Heat Exchanger Manual No. 837

Name .....
Title .....
Company .....
Address .....
City ..... Zone .... State .....

▲ For more details circle NED-360 F4 on enclosed inquiry slip ▲

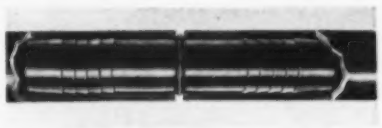
FILE OR SAW ADAPTOR
for use on portable nibbler



Attachment of a file or saw adaptor to a modified nose piece and replacing the driving cam with another of longer stroke converts the Fenway portable nibbler to a high speed file or saw. Chuck readily accommodates either the file or saw. High speed 1/6-hp motor is built into the tool which utilizes a punch and die action to cut all metals up to 14 gage, including stainless steel. As file or saw, tool can be used on any type of metal or wood surface, curved or flat. Made by **Fenway Machine Co.**, 265 N. 23rd St., Philadelphia 3, Pa.

▲ For more details circle NED-361 F4 on enclosed inquiry slip ▲

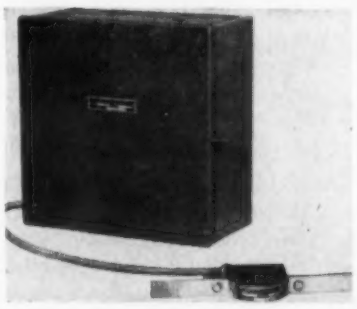
PLASTIC PIPE
in ½ to 1½-in. sizes



Added to line of industrial rubber products is lightweight, flexible plastic pipe for conveying liquids intended for human consumption. It is made of virgin polyethylene compounded with nontoxic ingredients and is completely immune to rot, rust and electrolytic corrosion. Pipe sizes range from ½ to 1½ in. with burst pressures from 450 to 200 psi. It is practical for jet well piping, municipal water and irrigation systems. Made by **Hamilton Rubber Mfg. Corp.**, 51 Mead St., Trenton 3, N. J.

▲ For more details circle NED-362 F4 on enclosed inquiry slip ▲

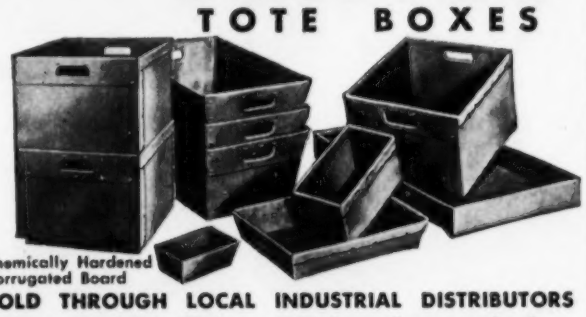
IMPACT ACTUATED CONTROL
operates die protection mechanism



Impact - sensitive pickup connected to electronic amplifier and relayed with shielded, plastic-covered cable comprises Impak-Switch control for operating die protection mechanisms, work stoppage signals, counters, etc. Impact against pickup of 1/10-oz falling 2 in. will operate control. Pickup can be attached to larger plate or to a chute. For operation by very small objects, pickup can be furnished with complete antivibration mounting bracket assembly. Amplifier is adjustable for varying impact intensities. Made by **Autotron Co.**, P. O. Box 722-D, Danville, Ill.

▲ For more details circle NED-363 F4 on enclosed inquiry slip ▲

FAMOUS "CHEM-BOARD"* CONVOY TOTE BOXES



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES
Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

▲ For more details circle NED-364 F4 on enclosed inquiry slip ▲

Equipto introduces NEW modern-flow LOCKERS

Advanced features abound in these ruggedly built, smartly styled new Equipto MODERN-FLOW Lockers. Sliding channel construction saves 83% of assembly time . . . eliminates need for nuts, bolts, or tools. Pilferproof design protects valuables. Gate-type, 4-point latch operates at finger touch . . . accommodates padlock, keyed lock, or combination lock.

And the gracefully rolled edges, recessed latches and louvres, handsome baked enamel finish, and complete absence of nuts, bolts, or protruding hinges give MODERN-FLOW Lockers a clean, luxurious "look" that would flatter any interior. Available in single and double tier types in all standard sizes. You can line them up side-by-side or back-to-back in any combinations desired. Standard colors and accessories.

See these handsome lockers at your Equipto distributor today or write us for fully illustrated literature.

Equipto
DIVISION OF AURORA EQUIPMENT COMPANY
690 Prairie Ave., Aurora, Ill. • Steel Shelving . . Parts Bins . . Drawer Units

▲ For more details circle NED-365 F4 on enclosed inquiry slip ▲

DIAMOND DRESSING TOOLS ARE VALUABLE—INCREASE THEIR LIFE WITH DIAMOND-MISER

Hydraulically operated, completely automatic diamond tool index.

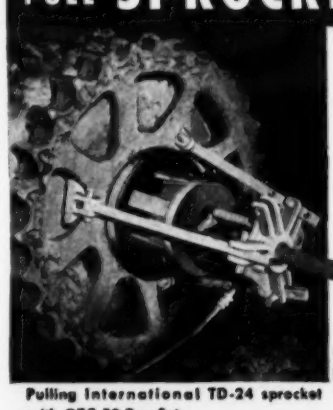
Wheel Trueing Hydraulic Diamond-Miser operates from hydraulic system of machine; provides precise diamond indexing and hydraulic accuracy of operation. Greatly extends diamond life by eliminating common causes of diamond spoilage and waste. Available for centerless, cam, crank and universal grinders, single or multiple wheel mounts.

Send for Informative Book and Price List.

WHEEL TRUEING TOOL COMPANY
47-3200 West Davison Avenue • Detroit 38, Michigan

▲ For more details circle NED-366 F4 on enclosed inquiry slip ▲

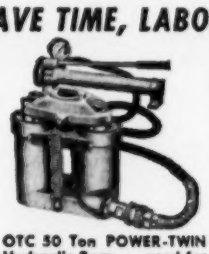
PULL SPROCKETS IN MINUTES WITH THE NEW OTC SPROCKET PULLER



Pulling International TD-24 sprocket with OTC 50 Ton Set.

OTC 50 TON Hydraulic Ram with Adaptors pulls or installs on the job or in the shop.

SAVE TIME, LABOR . . . REDUCE "DOWN-TIME"



OTC 50 Ton POWER-TWIN Hydraulic Ram . . . used for hundreds of tough jobs including the above.

Now the costly job of pulling Crawler-Tractor sprockets can be done in minutes by one man. Manufacturers approved sets are available for, Caterpillar, Allis-Chalmers and International Harvester . . . or a Universal Set to fit all three. If you have a 50 Ton OTC Ram, you need only the adaptors . . . three types of pumps available.

SEND FOR FREE FOLDER

OWATONNA TOOL COMPANY
436 Cedar Street • Owatonna, Minnesota

▲ For more details circle NED-367 F4 on enclosed inquiry slip ▲

Look to Morton FOR FIXTURE CLAMPS

AND FIXTURE DETAILS

WRITE TODAY

AND BE ASSURED OF QUALITY, SERVICE AND FINE WORKMANSHIP

Widest range of types and sizes in the industry . . . Complete Clamp Assemblies or any of their Component Parts . . . Economize by using them as Standards.

For Catalog of our complete line. Includes full size tracing templates of each product. Save looking and designing costs.

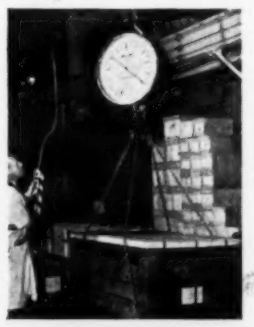
MORTON MACHINE WORKS

2421 WOLCOTT STREET • DETROIT 20, MICHIGAN

For more details circle NED-368 F4 on enclosed inquiry slip

You'll never regret putting me to work in your plant

I'm Hydroscale®—I'll go to work at a price you can well afford—Guard you against losses—Watch weights on the dock, in production and processing—Help you make money as well as save it! My buddies are on the job from coast to coast eliminating the expense and inconvenience of ordinary weighing stations, making weighing practical and convenient—a part of your handling operation.



HYDROSCALE®

Over 60 standard models
500 to 200,000 lbs.
Pound-Kilogram models,
Batching models, etc.

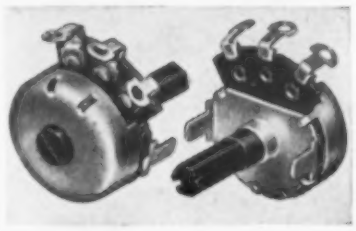
HYDROWAY SCALES, INC.

20624 WEST 8 MILE ROAD · P.O. Box 4754 · DETROIT 19, MICH.

Trade Mark registered U. S. Pat. Off.

For more details circle NED-369 F4 on enclosed inquiry slip

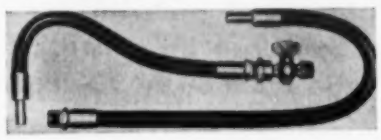
VARIABLE RESISTOR
shaft adjustable from either side



A Bakelite shaft that is adjustable from either side is feature of type LR6 tab-mounting variable resistor. To preserve shaft alignment with negligible side motion, front plate containing the mounting ears, has extruded portion that serves as bushing. In spite of small size of 0.894 in. diameter, resistors dissipate full 0.5-w. They find use as rear-of-chassis and concealed front panel controls in circuits requiring only occasional adjustment. Controls are available with shaft lengths of 3/16, ½, ⅝, ¾ and 1 in., and in all resistance values, tapers and other specifications according to RETMA standards. Made by **Stackpole Carbon Co.**, Electronic Components Div., Dept. NED, St. Marys, Pa.

For more details circle NED-370 F4 on enclosed inquiry slip

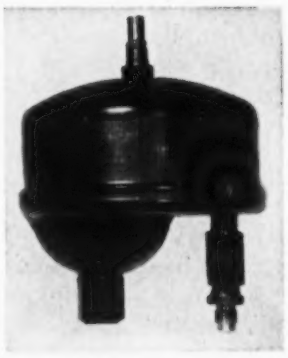
COOLANT HOSE
bends and retains position



Free from clogging, corrosion and leakage, Flex-Set plastic coolant hose assembly bends into any shape, then retains this position until changed. It is unaffected by vibrations or coolant pressure. Made by **Couse & Bolten Co.**, Plastics Dept., 42D Lafayette St., Newark, N. J.

For more details circle NED-371 F4 on enclosed inquiry slip

AUTOMATIC AIR TRAP
assures dry air in pneumatic system



Dry air is assured at all times in pneumatic systems, regardless of humidity or other factors, by the F3030 automatic air trap. Device is float type water ejector which discharges accumulated water from air system. Usually piped directly into bottom of air line filter bowl, trap can also be applied to drain line at any place in system. Water is completely discharged within 5 seconds upon accumulation of 3 to 4 oz. Each unit has capacity up to 20 gph. Sump is provided for periodic cleanout of dirt. All parts are non-corrosive and needle type valve has renewable seat. Made by **American Injector Co.**, Industrial Equipment Div., Dept. 5, 1000 E. McNichols Rd., Detroit 3, Mich.

For more details circle NED-372 F4 on enclosed inquiry slip

Your Handy Guide to RELAYS and TIMERS

This handy, 32-page booklet contains condensed data on the most widely used of Struthers-Dunn's over 5,348 relay types. Copy gladly sent on request.

S-D

STRUTHERS-DUNN

RELAY HEADQUARTERS

NEW ADDRESS

Struthers-Dunn, Inc., Lamb's Road, Pitman, N. J.

ATLANTA • BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND
DALLAS • DETROIT • KANSAS CITY • LOS ANGELES • MINNEAPOLIS • MONTREAL • NEW ORLEANS
NEW YORK • PITTSBURGH • ST LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

For more details circle NED-373 F4 on enclosed inquiry slip

BREEZE Job-Engineered BELLOWS

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.

700 Liberty Ave., Union, N. J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

For more details circle NED-374 F4 on enclosed inquiry slip

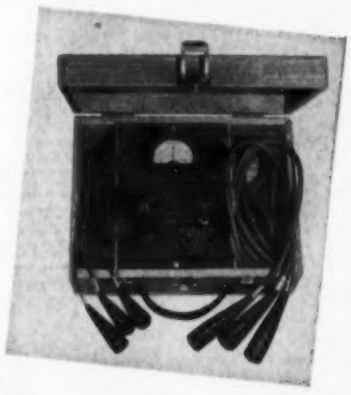
BIDDLE MOTOR ROTATION and PHASE TESTER

For determining:

. . . Direction of rotation of electric motors before they are connected to the line.

. . . The phase rotation or sequence of energized power circuits.

Here is a positive means for determining which motor leads must be connected to certain conductors of a supply system to insure that the motor will rotate in a prescribed direction when energized.



For complete details write for *Bulletin 80-D*

B-414

JAMES G. BIDDLE CO.

Electrical & Scientific Instruments

1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-375 F4 on enclosed inquiry slip

ALGRIP FLOORING STOPS ACCIDENTS—PAYS FOR ITSELF IN INSURANCE SAVINGS

If plant accidents are hiking your costs and cutting production, end both with ALGRIP Abrasive Rolled Steel Floor Plate. For ALGRIP *stays* non-slip even on steep inclines—actually pays for itself in savings on insurance premiums.

Hundreds of tiny abrasive particles impregnated *to a controlled depth of penetration* into tough, lightweight steel plate give each square foot of ALGRIP a "grinding-wheel" grain surface that can't wear out because hard use only exposes new gripping particles . . . an exclusive ALGRIP feature.

Investigate ALGRIP now and begin cutting costs. Send today for full details. There's no obligation.

A.W. ALGRIP *Abrasive Rolled Steel Floor Plate.*

ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

Please send free booklet AL-4 on savings from safety with ALGRIP.

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

For more details circle NED-376 F4 on enclosed inquiry slip

Pines Series 1400 production bender installation at Quaker Stretcher Company, Kenosha, Wis.

HOW SMALL PINES *Hydraulic* BENDERS SPEED OUTPUT of TV SERVETTE TRAYS

At Quaker Stretcher Co., Kenosha, Wis., four Pines Series 1400 Benders are producing high quality bends for TV servette tray legs at unusually low cost. Two smooth, 90° bends on a 2" CLR are formed in 5/8" x .018" wall, roller-coated, lock-seam tubing *without marring the black enamel finish.* The machines, costing under $2000.00 each, are operated by women. High efficiency is maintained. *Net production per machine averages 432 bends per hour,* and the only scrap loss is a very few pieces while making setups. Pines Series 1400 Benders feature small capital investment, fast, easy operation, and uniform results. Hydraulic actuation assures dependable accuracy, low operating cost.

Closeup showing easy-operating manual toggles, simple tooling. Plug mandrel, Ampco bronze wiper die produces smooth, mar-free bends in pre-coated stock.

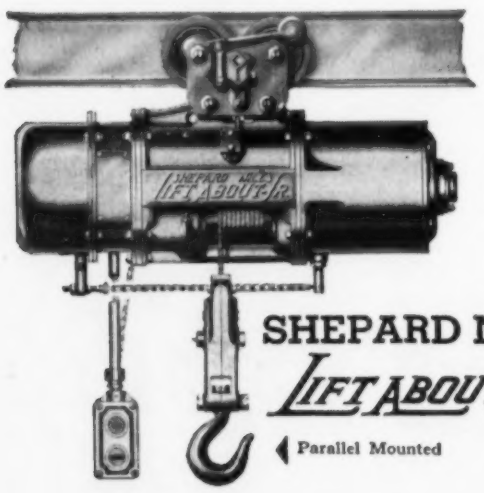
Free DATA SHEETS

Write for free copies of "Pines News" illustrating latest cost-cutting bending techniques. Or, call on Pines Engineers for assistance on any job.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 640 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

▲ For more details circle **NED-377 F4** on enclosed inquiry slip ▲

Hook your load to a SHEPARD NILES



SHEPARD NILES *LIFT ABOUT-JR.*

◀ Parallel Mounted

● Lighten your work with a Lift About-Jr.! It's the perfect hoist for a hundred-and-one lifting jobs in your plant.

● This Shepard Niles Hoist is the toughest light-service hoist on the market, offers you years of dependable lifting. Available in 250, 500, 1000 or 2000 lb. capacities, it features trouble-free wire rope hoisting . . . can be obtained with either rope or push-button operation. The Lift About-Jr. is offered parallel or cross-mounted with bolt, hook or trolley suspension.

● Ask the Shepard Niles representative to tell you about the Lift About-Jr. line. He'll help you select a hoist with the right capacity and controls for your job.

Cross Mounted LIFT ABOUT-JR.

CRANES OVERHEAD: Top Running, Inner Running, Under Running, Floor or Cab Operated

HOISTS Operated from Cab, Floor or Pulpit

SHEPARD NILES
CRANE AND HOIST CORPORATION

SHEPARD NILES Crane and Hoist Corp.
1851 Schuyler Ave., Montour Falls, N.Y.
( ) Please send me your new Lift About-Jr. Bulletin.
( ) Please have a representative call.

MAIL COUPON!

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle **NED-378 F4** on enclosed inquiry slip ▲

STOCK REEL powered by spring of stock

Base for the Jaco automatic stock reel changes the angle of feed and allows reel to take advantage of the natural spring of the uncoiling stock. This action furnishes all of the power for the reel. Fully automatic, the reel maintains a loop of stock between coil and press feed to eliminate slippage, kick-back and over-run. Stock is supplied at whatever speed is established by the feed. Available with 24, 30 and 36-in. platens, the reel will operate with almost any type of coiled stock which fits the platen and weighs not over 250 lb. Made by **Jaco Devices, Inc.,** 95 High St., Hingham, Mass.

▲ For more details circle **NED-379 F4** on enclosed inquiry slip ▲

HEAVY-DUTY DRILLING MACHINE has 1¾-in. capacity in cast iron, and speed range from 80 to 700 rpm

Magnetic starting, infinitely variable control of spindle speed in high and low range and three automatic as well as manual feeds are incorporated in model AB4 heavy-duty, column - type drilling machine. Capacities in cast iron and in steel range up to 1¾ and 1⅜ in., respectively. Preselection of spindle speed in low range from 80 to 240 rpm, and high, from 240 to 700 rpm is effected by lever actuating a two-step change-gear transmission. Automatic feeds are 0.004, 0.007 and 0.012 in. per revolution; spindle travel is 6⅞ in.; and swing is 27 in.

Motor is standard 3-hp, 220/440-v, 60-cycle unit with switch gear, magnetic control and fuses contained in one box mounted below motor. Optionals include electrically controlled coolant system, magnetic spindle reversing control, automatic tapping arrangement and pedal switch for emergency control of tapping operation. Motor for speeds of 60 to 460 rpm or 160 to 1400 rpm can be supplied, as well as pole-changing motor for speed range of 80 to 1400 or 40 to 700 rpm. Made by **Alzmetall,** United States Office, 30 Church St., New York 7, N. Y.

▲ For more details circle **NED-380 F4** on enclosed inquiry slip ▲

Oversize is often a Handicap . . . especially in Limit Switches

The new Bulletin 802T Limit Switch has no useless bulk . . . no excess weight . . . yet it is good for millions of trouble free operations. This oiltight limit switch has double break, maintenance free, silver contacts. Various operating heads are available with different types of pushrods and levers. The interchangeable operating heads may be mounted in any one of four positions to fit any location on your machines. Write for Bulletin.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wisconsin

ALLEN-BRADLEY QUALITY **LIMIT SWITCHES**

▲ For more details circle **NED-381 F4** on enclosed inquiry slip ▲

NEW Improved TOLEDO Simpact

1" to 2" Self-Contained Ratchet Threader

WITH *CAM-TYPE* PIPE HOLDER

★ *Improved* cam-type quick-action pipe holder has broader jaws for more positive grip on pipe.
★ Free action cam assures instant setting to any size—1" to 2".
★ Easy to center . . . you get perfect aligned threads.
★ Fewer moving parts . . . minimum wear . . . light in weight. Amazingly compact . . . will thread a pipe projecting through a wall as short as 6¼".
★ Accuracy proven through the years . . . dies recede along tapered steps. A fine quality tool—yet low in cost! Write for new catalog. Order through your supply house. The Toledo Pipe Threading Machine Co., Toledo, Ohio. New York Office: 165 Broadway, Room 1310.

RELY ON THE LEADER! **TOLEDO**
PIPE TOOLS . . POWER PIPE MACHINES
POWER DRIVES

▲ For more details circle **NED-382 F4** on enclosed inquiry slip ▲

KLIXON PROTECTED MOTORS

. . . used for over 15 years on "TACO" Water Circulating Pumps to assure dependable operation

Illustrated is a Taco Water Circulating Pump manufactured by Taco Heaters Incorporated, Providence, R.I. The motors used in these units have built-in Klixon Protectors to prevent motor burnouts. Here's what Mr. R. T. Schoerner, Chief Engineer, has to say about Klixon . . .

"We have been using motors equipped with Klixon Overload Protectors on our circulating pumps for more than 15 years. We have found these protectors to be unusually dependable for this tough service."

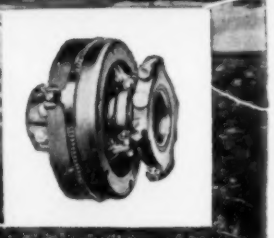
As a user of electric motors, you can keep your equipment operating, cut motor repair and replacement costs by using motors with built-in Klixon Protectors. The additional cost is low . . . pays for itself in short order.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1906 FOREST ST., ATTLEBORO, MASS.

KLIXON

▲ For more details circle **NED-383 F4** on enclosed inquiry slip ▲

HOW TO GET THE RIGHT CLUTCH



Whatever your power transmission control requirements may be, your product will benefit by using a clutch that is exactly suited to its need. Thousands of manufacturers — in hundreds of industries — have increased the efficiency of their machines with the right ROCKFORD CLUTCHES. Our engineers are not restricted to any one type or size of clutch — but are free to specify one that is best suited to the particular operating essentials of your product.

Write for our latest bulletin that shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS, with diagrams of unique applications, capacity tables, dimensions and specifications.

ROCKFORD CLUTCH DIVISION
BORG-WARNER
513 Catharine Street, Rockford, Illinois

ROCKFORD CLUTCHES

▲ For more details circle **NED-384 F4** on enclosed inquiry slip ▲

TEN MINUTES
From Box To Board
CAN CUT YOUR DRAFTING COSTS AS MUCH AS 50%

Engineers and product designers are under heavy pressure today — an unprecedented peacetime urgency to develop new consumer products ahead of competition.

Cluttered boards can't promote organized work. Look at your board — then picture it equipped with a Universal Drafting Machine that combines into one versatile, easy-to-operate instrument all the most used tools of the drafting art.

The transition takes only minutes. Universal can be adjusted in the field to any flat or angle board. It is precision engineered in every detail — has easy-to-read protractor — shows high accuracy at the end of an eighteen inch scale — and maintains this accuracy for years.

If you want to see your work load go down and output go up — write today for descriptive bulletins on Universal Drafting Machines and Duraline scales.

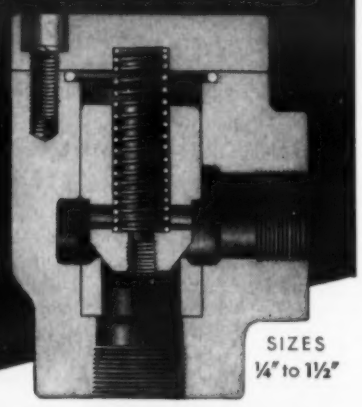
UNIVERSAL DRAFTING MACHINE CORPORATION
7960 LORAIN AVENUE CLEVELAND 2, OHIO

For more details circle NED-385 F4 on enclosed inquiry slip

RIVETT

Hydraulic check valves

PIPE THREAD OR FLANGE CONNECTED
SPRING CLOSED OR PILOT OPERATED
MOUNTED IN ANY POSITION
3,000 P. S. I.



SIZES ¼" to 1½"

Model 8640, Spring Closed • Model 8642, Pilot Operated
Model 8644, Pilot Operated with Pressure Breaker

Allow free flow in one direction, but prevent flow in opposite direction. Large areas through valve permit unusually large volume. Ex: 1½" valve has 104.2 G.P.M. capacity at 15 ft. per sec.

Call Your Local Rivett Dealer Or Write Direct

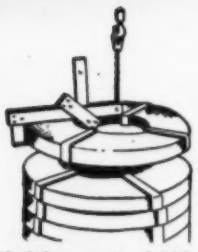
RIVETT LATHE & GRINDER, Inc., Dept. NED6, Brighton 35, Boston, Mass.
Rivett Furnishes A Complete Power Package

For more details circle NED-386 F4 on enclosed inquiry slip

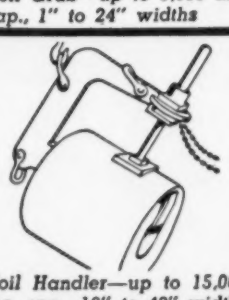
DIXON

ONE MAN coil stock grabs all sizes... LIFT TURN STACK

Coil Grab—up to 5,000 lbs. cap., 1" to 24" widths



Coil Lift—up to 2,000 lbs. cap., 1" to 24" widths



Coil Handler—up to 15,000 lbs. cap., 18" to 48" widths

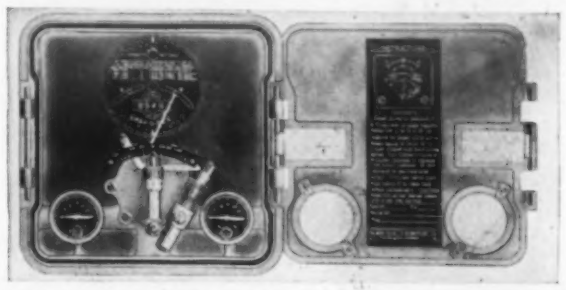
COMPLETE LINE OF COIL HANDLING EQUIPMENT
- *From Slitter*
- *To Storage*
- *To Reel*

DIXON *Automatic Tool, Inc.*
2300 23rd AVE. • ROCKFORD, ILLINOIS

For more details circle NED-387 F4 on enclosed inquiry slip

COMPENSATING PILOT for liquid level controllers

Type 1450 pilot for displacement type liquid level controllers reflects changes in liquid level or a change in gravity of the controlled fluid. "Throttling" range



is calibrated from 0 to 100 per cent. Specific gravity index is provided to offer a method of compensating for various gravities of liquids or for interface services. Pilot is adjustable for "snap" or "on-off" action. Amount of liquid level change from open to shut positions of control valve may be varied up to 75 per cent of displacement element length when set for snap action or can throttle over the full element length. Made by **Black, Sivalls & Bryson, Inc.**, Dept. NE-4-a, 7500 E. Twelfth St., Kansas City 26, Mo.

For more details circle NED-388 F4 on enclosed inquiry slip

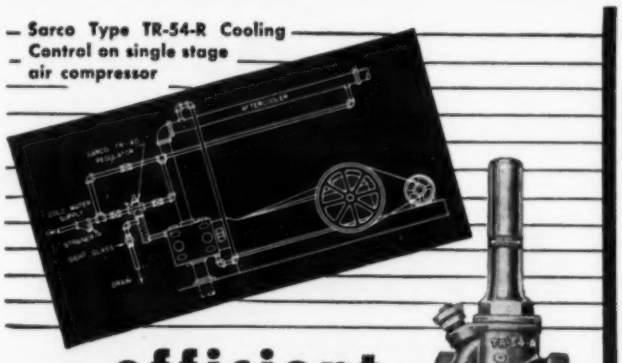
LOW TEMPERATURE TUMBLING BARREL for deflashing soft rubber parts utilizes liquid CO_2 for cooling

Liquid carbon dioxide is utilized as refrigerant in this thermostatically controlled low-temperature tumbling barrel designed for deflashing parts molded of soft rubber. The CO_2 is contained in separate tank and fed through appropriate controls into barrel where it expands and absorbs heat to provide the desired low temperature. Range is 0 to −120° F. Barrel is octagonal in shape and is lined with stainless steel and insulated with 3-in. thick special material.

Guarded chain drive, variable-speed gearhead motor with magnetic brake, hinged door with spring loaded latches and pushbutton control with thermal overload protection are featured. Inside barrel size is 33 in. long by 26-in. diameter. Height is 65 in., and floor space required is 46 x 58 in. Barrel can be supplied without completely assembled liquid CO_2 controls if operation with dry ice is desired. Made by **Tumb-L-Matic, Inc.**, 4511 Bullard Ave., New York 70, N. Y.

For more details circle NED-389 F4 on enclosed inquiry slip

— Sarco Type TR-54-R Cooling Control on single stage air compressor



efficient COMPRESSOR COOLING

- Do you want to avoid over — or under — cooling?
- Do you want to save cooling water and lubricants?
- Do you want to increase the efficiency and life of your air compressor? . . . then install SARCO COOLING CONTROLS

Simple • Self-operated • Inexpensive

Ask for Bulletin No. 701

Sarco TR-54-R

SARCO COMPANY, INC.
EMPIRE STATE BUILDING, NEW YORK 1, N. Y.
Represented in Principal Cities
SARCO CANADA LTD., TORONTO 8, ONTARIO

518

For more details circle NED-390 F4 on enclosed inquiry slip

SPEEDY is the word for SPEEDEX, the new Murex contact electrode. Iron powder in its heavy coating improves arc action and supplements the deposit from the core wire to give amazingly high deposition rates. With SPEEDEX you can increase welding output and cut deeply into time and labor costs (by far the major expense items in any welding operation).

SPEEDIER than any conventional mild steel electrode — twice as fast as an E-6012 rod — SPEEDEX provides deposition rates up to nearly 10 lbs. an hour with a 3/16" electrode, almost 15 lbs. an hour with a ¼" electrode. This means you can make single pass fillets at unheard of travel rates — 15 inches a minute or better.

SPEEDEX is an operators' rod too. They like its smooth, easy arc action — with either the drag or the open arc technique. It gives them no trouble with sidewall wash or undercutting. Its slag is almost self-removing. The finely rippled deposit has excellent surface appearance. And, under the surface, SPEEDEX welds are strong, sound and ductile — 85,000 to 90,000 psi ultimate strength with 73,000 to 78,000 yield and 15% to 25% elongation in 2 inches.

MUREX Electrodes • Arc Welders • Accessories

METAL & THERMIT CORPORATION 100 EAST 42nd STREET NEW YORK 17, N. Y.

For more details circle NED-391 F4 on enclosed inquiry slip

You need U. S. GRIZZLY Uskorona-insulated Power Cables

Here's an illustration showing how ozone can chew up a sturdy, rugged cable. This can never happen with United States Rubber Company's famous Grizzly® Power Cables insulated with Uskorona® compound which prevents electrical failure caused by ozone (Uskorona-1 oil base compound or Uskorona-2 butyl rubber compound). Uskorona meets (and in many ways exceeds) the applicable IPCEA specifications for ozone-resistant rubber insulation.

As the only wire manufacturer that grows its own natural rubber, produces its own synthetics and makes its own plastics (as well as the bulk of its own rubber-compounding chemicals and ingredients), United States Rubber Company is able to make certain that only the finest materials are used in the insulations for its own wires and cables. These materials are expertly compounded according to methods devised after years of research and experimentation in "U. S." laboratories. Finally, U. S. Rubber's practical "know-how" contributes its important part to the uniform high quality of every "U. S." insulation. This "know-how" is the result of 68 years of successful manufacture of electrical wires and cables, and over a century in the making of fine rubber products.

U. S. Grizzly Uskorona-insulated Power Cable, 5,000 Volts, type RR, 3 conductor, shielded, Neoprene jacket.

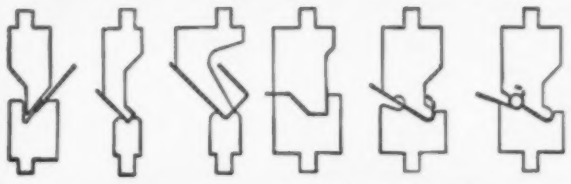
Send for free catalog giving full information about U. S. Electrical Wires and Cables.

UNITED STATES RUBBER COMPANY
ELECTRICAL WIRE & CABLE DEPARTMENT
ROCKEFELLER CENTER, NEW YORK 20, N. Y.

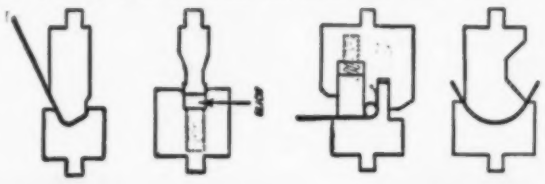
For more details circle NED-392 F4 on enclosed inquiry slip

famous "34 year"

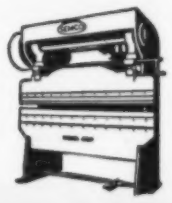
BRAKE DIES



ANY SPECIAL SIZE OR SHAPE CAN BE DEVELOPED BY OUR EXPERIENCED ENGINEERS



Made by the makers of SEMCO PRESS BRAKES (6ft.—8ft.)



Write for new literature showing 26 Standard Brake Die styles and 2 sizes of low priced Press Brakes.

SEMCO

SERVICE MACHINE CO., INC.

202 MILLER STREET ELIZABETH 4, N. J.

For more details circle NED-393 F4 on enclosed inquiry slip

SAVE... TIME MONEY TROUBLE

Rex Sprockets with Taper-Lock Bushings

Here are the sprockets that give you quick, off-the-shelf delivery...are quick to put on or take off the shaft...and that save you money. Just assemble sprocket and bushing and lock them on the shaft. No re-boring, key seating or drilling and tapping for setscrews required. Get all the cost-saving facts. Send for your copy of Bulletin 53—21. Write Chain Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

For more details circle NED-394 F4 on enclosed inquiry slip

SEAL OFF LEAKS

✔ Quick!
✔ Easy!
✔ Low Cost

Stop Moisture Penetration thru Basement Walls ...

Leaks in concrete walls, masonry, cinder block, etc. can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. Used in elevator pits, tunnels, dams, tanks, retaining walls, etc. (Minimum quan. 6 gal.)

MAIL COUPON for TRIAL OFFER!

FLEXTITE

FLEXROCK COMPANY
3603-F Filbert St., Philadelphia 1, Pa.
Offices in Principal Cities

Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation

Name .....
Company .....
Address .....

For more details circle NED-395 F4 on enclosed inquiry slip

RAM-TYPE VERTICAL MILL
for production and tool room milling

Vertical adjustment of head on model 1-B vertical mill is by counterbalanced ram, resulting in high degree of accuracy and rigidity because of large scraped bearing surface area. Table working surface of this massively designed 3100-lb mill is 10 x 40 in., maximum longitudinal table movement is 24 in. and cross movement is 12 in. Range of opening from table to spindle nose is 4⅛ to 18¼ in. Other specifications include spindle quill diameter of 3½ in. with 5-in. travel and speed range from 75 to 3000 rpm. Optional equipment includes 10 x 48 in. table, longitudinal power feed for the table, verniers and a coolant system. Made by **Industrial Metal Products Corp.**, 3413 W. St. Joseph St., Lansing, Mich.

For more details circle NED-396 F4 on enclosed inquiry slip

INDUSTRIAL FURNACES
350,000 and 450,000 Btu sizes now offered in oil and gas-fired models

Oil and gas-fired models rated at 350,000 and 450,000 Btu are now available in line of heavy-duty industrial furnaces which will eventually include sizes up to 1,200,000 Btu/hour output. Units are shipped wired and assembled after fire-testing at factory. Installation requires placement of unit; providing fuel, electricity and flue; and connecting necessary ductwork. Units can be installed vertically for upward air delivery, or suspended for downward or horizontal delivery.

Airfoil shape of the primary combustion chamber and secondary heat exchanger tubes causes moving air to flow without turbulence. Two double width, double-inlet centrifugal blowers on common shaft, driven by long-duty motor, provide good air distribution over entire heat exchanger area. Induced draft blower is standard on three of the four models. Units measure 29 x 63 x 65½ in. and have steel cabinet finished in blue baked-on enamel. Made by **Armstrong Furnace Co.**, Dept. ND, 851 W. Third Ave., Columbus 8, O.

For more details circle NED-397 F4 on enclosed inquiry slip

Ask your CHASE BAG C-man for money-saving packaging ideas

CHASE LINERS

Chase crinkled paper liners come in two types: Crinkled, for one-way stretch...crinkled and pleated for stretch in all directions. Available waxed or unwaxed for all size bags, barrels and boxes. Keeps contents dry and contamination free.

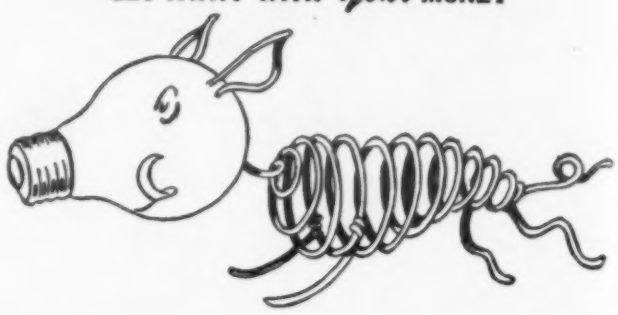
Call or write today for additional information!

SINCE 1847 CHASE BAG COMPANY

Industrial Department: 309 W. Jackson Blvd., Chicago 6, Ill.
30 BRANCHES AND SALES OFFICES—STRATEGICALLY LOCATED

For more details circle NED-398 F4 on enclosed inquiry slip

DON'T LET THIS **CUR-RENTELOPE** GET AWAY WITH *Your* MONEY



The Cur-rentelope elopes with excess current if you don't watch out. The Cur has his lair in plants and offices that haven't followed the suggestions in the *Champion Maintenance Manual**—and that aren't equipped with the right lamps—efficient, long-lasting Champion Incandescent Bulbs and Fluorescent Tubes.

**May we send you a free copy?*

CHAMPION LAMP WORKS
586 Broad Street • Lynn, Massachusetts

CHAMPION Lamps

For more details circle NED-399 F4 on enclosed inquiry slip

NOW YOU CAN HAVE **METERED SURETY** IN HANDLING CORROSIVE LIQUIDS

All Stainless Steel Meter

Rotocycle meter, cut away to show the all-revolving rotor construction.

CONTROLS FORMULAS, COSTS, INVENTORIES

Rockwell Model 2-BC stainless steel meters provide indisputable records for the quantities of corrosive liquids used in mixing formulas. They provide basic accounting facts for accurate cost identification; for inventory controls; for tax analysis purposes.

These meters are constructed *inside and out* of stainless steel. Rated capacity 100 gpm. Quantity control registers and electrically actuated remote registration systems are available. Described in bulletin OG-403. Write *Rockwell Manufacturing Co., Dept. D-3, Pittsburgh 8, Pa.*

YOU CAN RELY ROCKWELL ON ROCKWELL

ROCKWELL INDUSTRIAL METERS

For more details circle NED-400 F4 on enclosed inquiry slip

now . . . more important than ever . . .

the efficiency, economy and dependability of Wells Heavy-Duty Cut-Off Saws

SEARCHING for a way to reduce metal cut-off costs? Here's an answer—the Wells No. 12 Saw. It's a heavy duty, hydraulically operated saw with automatic cutting cycle designed to step up production with greater accuracy. Capacity is 12" x 16", rectangular, 12¾" dia., rounds. Ask your Wells Dealer for full information or write direct.

Wells

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-401 F4 on enclosed inquiry slip

Only
ANACONDA TYPE TW
has new non-deteriorating "slipper" compound

- no pulling compound's necessary
- makes rewiring easier
- makes it easier to fish
- speeds work

For full information, see your Anaconda Sales Office or Distributor. *Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.*
54449

the right cable for the job

ANACONDA® WIRE AND CABLE

▲ For more details circle **NED-402 F4** on enclosed inquiry slip ▲

FREE...

FOR... DESIGNERS
METHODS ENGINEERS
PROCESS ENGINEERS
PRODUCT ENGINEERS
MECHANICAL ENGINEERS
RESEARCH ENGINEERS
SUPERINTENDENTS
PURCHASING AGENTS

SEND FOR THESE HELPFUL BULLETINS TODAY

SERVICES BULLETIN NO. 161 describes the facilities that make Federal a *one-stop* stamping service. Specifications cover special die stamped wrenches, nameplates, and quality short run stampings from any stampable material.

COSTS BULLETIN NO. 101 shows how Federal's special dies give the accuracy, exact duplication, and tolerances of permanent dies *plus* saving as much as 80% on die costs.

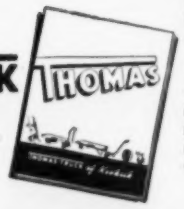
Federal TOOL AND MANUFACTURING CO.
3618 ALABAMA AVE. (ST. LOUIS PARK)
MINNEAPOLIS, MINNESOTA
"QUALITY STAMPINGS IN SMALL QUANTITIES"

▲ For more details circle **NED-403 F4** on enclosed inquiry slip ▲

THE "Handy" CASE TRUCK
for WAREHOUSES
DELIVERY TRUCKS—
OFFICES—STORES—
INSTITUTIONS—
GENERAL USE

Here's a light, strong, easy-to-use truck for beverage handlers, shop receiving rooms, retail stores, etc. Ideal for use on delivery trucks. Large, quiet, 10" semi-pneumatic wheels absorb jars, roll easily over curbs, and climb stairs. Perfectly balanced for easy handling of cases, boxes, cartons, kegs, cylinders and all moderate-weight loads. Model No. 51, shown above, has Hyatt roller bearing wheels equipped with grease fittings.

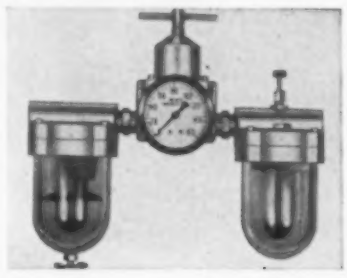
THOMAS TRUCK & CASTER CO.
471 Mississippi River
KEOKUK, IOWA



Send for Free Catalog to see complete line of Case Trucks.

▲ For more details circle **NED-404 F4** on enclosed inquiry slip ▲

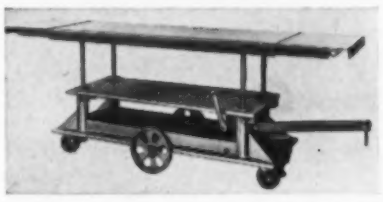
AIR PRESSURE REGULATOR
also functions as filter and oiler



Stable air line pressure regulation, controlled oil injection and efficient filtering are combined in one unit with a maximum operating pressure of 160 psi. Porous sintered bronze filtering element is cone shaped and will not collapse or wear out. Brass drain cock permits quick removal of moisture and sediment. Oil is preatomized before it is introduced into the air stream and its volume can be balanced with air demand. Made by **Air-Mite,** 4417N W. Carroll Ave., Chicago 24, Ill.

▲ For more details circle **NED-405 F4** on enclosed inquiry slip ▲

ELEVATING TABLE
for handling sheet and strip

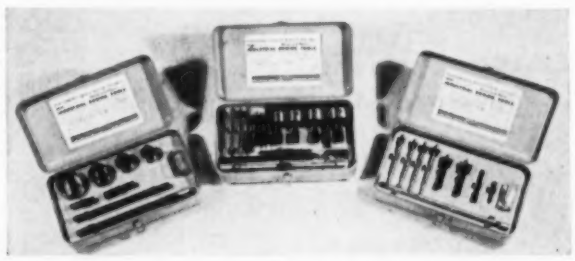


Handling of narrow sheet or strip material from storage to the machine and between a series of machine operations is facilitated by the Portelvator. Top table surface, which has a 14-in. adjustment from 24 to 38 in. above floor level, measures 26 x 72 in. Drop leaves increase the length to 108 in. Capacity is 5000 lb. Table is raised and lowered by a hand crank. An extra fast lift mechanism is incorporated for light loads or quick return. Two 12½-in. wheels and four 6-in. casters are arranged to provide the shortest possible turning radius. A 30-in. retractable tongue provides a hitch for towing. Floor locks are provided at each end. Made by **Hamilton Tool Co.,** 901 Hanover St., Hamilton, O.

▲ For more details circle **NED-406 F4** on enclosed inquiry slip ▲

WOOD BORING TOOLS
drill head fastens on pipe

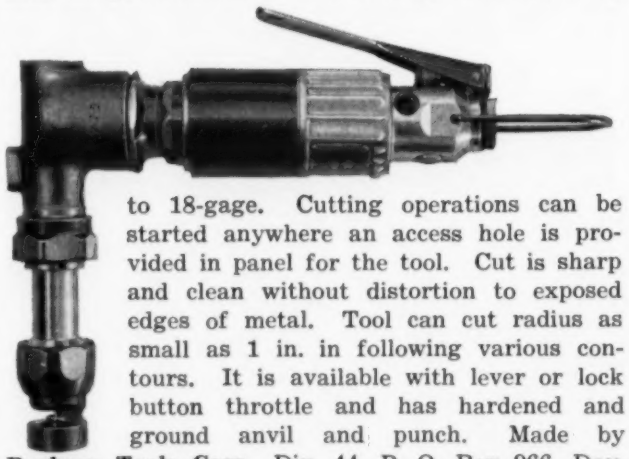
Holes from ⅝ to 2 9/16 in. can be bored in wood or low melting point plastics with ten sizes of Time Saver industrial boring tools used in ¼ or ½-in. electric drill. Drill head can be fastened directly to pipe with standard fittings so that the pipe drills its own hole. Pipe extensions can be made to any desired length. Magic Circle guide ring regulates depth of cut on large size bits and makes entering and breaking-through on extreme angles both possible and safe. Front rake design of bit is reported to minimize horsepower requirements. Various kits are available. Made by **Time Saver Tools, Inc.,** Dept. N54, Mundelein, Ill.



▲ For more details circle **NED-407 F4** on enclosed inquiry slip ▲

AIR-POWERED NIBBLER
cuts up to 18-gage sheet metal

Extended head which allows use in confined areas and in formed metal panels is featured by this portable, air-powered nibbler for cutting sheet metal up to 18-gage. Cutting operations can be started anywhere an access hole is provided in panel for the tool. Cut is sharp and clean without distortion to exposed edges of metal. Tool can cut radius as small as 1 in. in following various contours. It is available with lever or lock button throttle and has hardened and ground anvil and punch. Made by **Buckeye Tools Corp.,** Div. 44, P. O. Box 966, Dayton 1, O.



▲ For more details circle **NED-408 F4** on enclosed inquiry slip ▲

Engineer reports:

"Maintenance practically eliminated with J-M Moulded Packing Cups"

A large laundry (name on request) encountered excessive downtime on presses, for maintenance of packings. When they changed to J-M Moulded Packing Cups, packing life was greatly increased, downtime drastically reduced, danger of soiling laundry from servicing packings eliminated.

J-M Moulded Packing Cups are made in many compositions to meet a wide range of pressures, temperatures and service conditions. For details write to Johns-Manville, Box 60, New York 16, N.Y. In Canada, 199 Bay St., Toronto 1, Ontario.

Johns-Manville PACKINGS and GASKETS

▲ For more details circle **NED-409 F4** on enclosed inquiry slip ▲

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier... Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

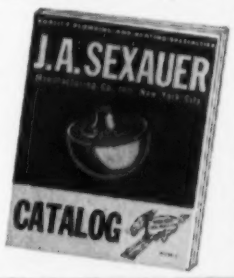
Built like a tire with Fiberglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with Fiberglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog H. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU-64
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog H.*

My name.....Title.....
Company or Institution.....
Street.....
City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

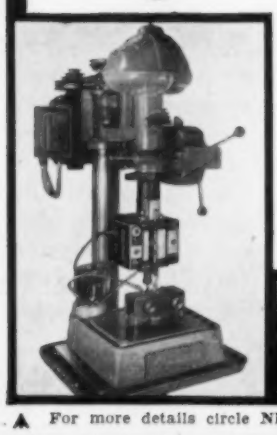
▲ For more details circle **NED-410 F4** on enclosed inquiry slip ▲

Commander LEAD-MATIC Tapper

Automatic Tapper with Lead Screw
FOR HIGH PRODUCTION PRECISION TAPPING

- Precision Ground Lead Screws Assure Finest Threads
- Electrically Controlled Cycle or Jog Tapping Action
- Hand, Foot or Fixture Switch, Control
- Easily Adapted to Any Drill Press
- Range #0 to ¾"

Built for high production tapping . . . precision or otherwise, the Commander Lead-Matic Tapper makes any drill press a precision tapping unit, even with inexperienced operators. Electric control of Cycle or Jog tapping action provides versatility to handle any job . . . automatic tap reversal eliminates drill press motor reversing and speeds tapping. Compact, ruggedly built, easy to operate, the Commander Lead-Matic Tapper will cut your tapping costs and reduce rejects to a minimum.



Write for illustrated circular and name of nearest Distributor.
Commander MFG. CO.
4220 W. KINZIE ST. • CHICAGO
PRODUCT OF COMMANDER... BUILDER OF PRODUCTION TOOLS

For more details circle NED-411 F4 on enclosed inquiry slip

At left: Jacketed 3-Way Plug Cock.

Below: Cutaway section of Jacketed Cock, showing packing gland construction.

H&B ESTABLISHED 1907

Jacketed Pipe, Pumps, Valves and Fittings . . .

Regardless of whether the material is being heated or cooled in the processing, and what heating or cooling medium is being used, H & B jacketed fittings are available for all applications. Steam, hot water or hot oil may be used for heating, cold water or brine for cooling.

H & B can save you money on your jacketed pipe and fitting requirements because we buy all standard size pipe from the mill in carload lots, make our own special flanges in quantities, and are tooled up for making jacketed equipment at lowest possible price. Write for Bulletin J-50.

Hetherington & Berner Inc.
751 Kentucky Avenue • Indianapolis 7, Indiana

For more details circle NED-412 F4 on enclosed inquiry slip

TUMBLE GRAV-I-FLO FINISH

. . . tumbling machines take

31% to 80%

more workload in the same floor space

Cutting Materials Shorten Cycle by 15% to 25%!

Grav-i-Flo equipment and supplies save substantially on mechanical deburring and finishing of metal parts, as well as produce a superior finish.

Complete Source: Machines in 5 sizes; natural and synthetic deburring and finishing chips and compounds; accessories for production tumbling.

SEND FOR CATALOG showing complete line of Grav-i-Flo equipment, accessories and supplies.

GRAV-I-FLO CORP., Dept. NED6, Sturgis, Mich.
☐ Please send complete catalog. ☐ Have Sales Engineer call. ☐ We are sending samples.

Company_____
Name_____ Position_____
City_____ State_____

For more details circle NED-413 F4 on enclosed inquiry slip

STORAGE YARD SUPPORTS
consist of rails and concrete piers

Yard storage of such heavy materials as steel pipe, tubing and beams is facilitated by high load capacity rail skids mounted on cast concrete supports. Cut-to-length railroad rails are bolted to supports and anchored with Foster rail clips. They can be quickly disassembled and moved together or farther apart, or can be moved from place to place to suit the job. In wet weather or in filled ground, skid can be moved and low spots brought up to ground level. Supplied by **L. B. Foster Co.**, Dept. 39, 11 Park Pl., New York 7, N. Y.

For more details circle NED-414 F4 on enclosed inquiry slip

ELECTRIC HOIST
2-hp unit rated at 2 tons

Rated at 2 tons capacity, J-3 electric wire rope hoist is available with two speed or single speed push button magnetic control. It is powered by a 2-hp totally-enclosed ball bearing motor and has 18-ft lift without overwind and 25-ft lift with overwind. Limit switches prevent overtravel in both directions. Frame is of circular section cast from high strength aluminum alloy. Magnetic disk-type motor brake and oil-bath Weston-type load brake are used. Plain, hand geared or motor driven trolleys are available. Made by **Robbins & Myers, Inc.**, Hoist & Crane Div., 1300 Lagonda Ave., Springfield 99, O.

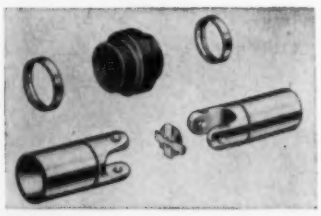
For more details circle NED-415 F4 on enclosed inquiry slip

ELECTRIC STOPWATCH
redesigned for greater accuracy

Greater accuracy of redesigned Time-It electric stopwatch used in laboratory work where precise, split-second timing is a must, makes unit practical for use in radioactivity counting systems. Stopwatch is offered in two models, one of which registers up to 1000 minutes in 1/100-minute intervals, the other up to 10,000 seconds in 1/10-second intervals. Both have clear indicating counters with large, legible numbers. Other features include dust-tight, enameled aluminum housing and location of re-setting knob on left side to free right hand for writing. Made by **Precision Scientific Co.**, 3735 W. Cortland St., Chicago 47, Ill.

For more details circle NED-416 F4 on enclosed inquiry slip

UNIVERSAL JOINTS
in light and heavy duty types



In every test conducted with 270 light duty and 271 heavy duty universal joints AN specifications were met or exceeded. Joints are available for military, commercial and private aircraft and possess high strength, safety and long life characteristics. Center block design provides toggle pins of equal strength and dimension. Boot is designed to retain bearing lubricant for several months without sweating or leaking, and withstands temperatures from −67 to 300° F. Within this range, it will flex through full range joint movement without cracking or leaking. Made by **Clary Multiplier Corp.**, Aircraft Div., Dept. K-1, 425 E. 54th St., Los Angeles, Calif.

For more details circle NED-417 F4 on enclosed inquiry slip

NEW ONE MAN SPEED INDICATOR
quickly checks motor RPM

Now one man can quickly & accurately check all your motor speeds with this combination revolution counter & stopwatch, and in a fraction of the time it would take two men with old fashioned counters.

Hundreds of users like Alcoa, GE, Westinghouse etc., report they save their initial cost many times over in spotting motor trouble before it becomes serious; checking conveyor and machine speeds; making sales demonstrations of motorized equipment; curbing tool breakage due to wrong speeds; etc. Three models, priced from $18.75, speed ranges to 50,000 RPM. Write, check inquiry slip —— or phone today for detailed pamphlet with specifications, and prices. Immediate delivery.

MONTGOMERY TOOLS

24 Austin St.
Newark 5, N. J.
BIgelow 8-1045

For more details circle NED-418 F4 on enclosed inquiry slip

This 12-Pointer is made in comparable dimensions in all popular sizes of standard nuts as well as "Huglock" and "Marsden" locknuts. "Huglock" and standard types illustrated.

12 POINTER

something new in NUTS

The 12-Pointer Nut was designed to allow the use of thin wall socket wrenches for high torques and heavy drives, especially where tool clearance is a factor. The basic problem involved, where thin wall socket wrenches are used on nut runners to drive hexagon nuts, is breakage at high torque. By providing twelve points on the nuts to mate with the 12 lands in double hexagon sockets, the driving loads are distributed so that thin wall socket wrenches of smaller outside diameter can be used without breaking. Fasteners may be more favorably placed and reductions in weight and material are possible through reduced tool clearances. This 12-Pointer is made in comparable dimensions in all popular sizes of standard nuts as well as "Huglock" and "Marsden" locknuts . . . *Send for 12-page brochure that supplies complete specifications, engineering data and prices.*

NATIONAL MACHINE PRODUCTS COMPANY

Manufacturers of standard and special hexagon nuts . . . "Huglock" and "Marsden" locknuts.

44231 Utica Road, Utica, Michigan

For more details circle NED-419 F4 on enclosed inquiry slip

One of two Car Spotters in use at the Cuneo Press, Chicago, for over 20 years.

HERE'S a sure way to reduce demurrage charges

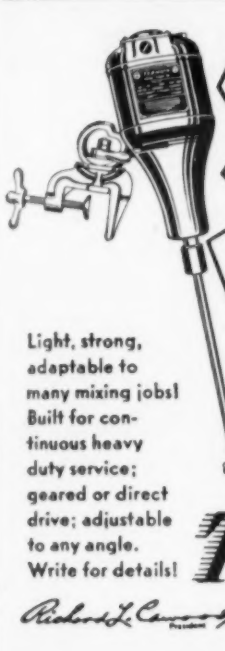
LINK-BELT CAR SPOTTER speeds spotting of cars for loading and unloading. That means reduced switching time and lower demurrage costs. And only one man is needed to move railroad cars. Add up these savings, and there's only one answer—lowered costs, money saved. Available in portable or stationary models for moving up to six loaded railroad cars.

LINK-BELT CAR SPOTTER 13,150

Send for Book 2092—for facts on car spotters and drum type pullers.

LINK-BELT COMPANY: Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices, Factory Branch Stores and Distributors in Principal Cities.

▲ For more details circle NED-420 F4 on enclosed inquiry slip ▲



LIGHT WEIGHT

TOUGH STRENGTH

HIGH QUALITY

at moderate cost

Light, strong, adaptable to many mixing jobs! Built for continuous heavy duty service; geared or direct drive; adjustable to any angle. Write for details!

PATTERSON TYPHOON MIXER

The Patterson Foundry and Machine Company
East Liverpool, Ohio, U. S. A.
NEW YORK, BOSTON, BALTIMORE, PHILADELPHIA, PITTSBURGH, DETROIT, CINCINNATI, ATLANTA, CHICAGO, ST. LOUIS, HOUSTON, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

▲ For more details circle NED-421 F4 on enclosed inquiry slip ▲

New Formgrinding Catalog Shows How To Get Unequalled

SPEED,
VERSATILITY,
ECONOMY

With GEARGRIND AUTOMATICS

YOUR PARTS—for aircraft, automotive, and many machinery applications, will be ground faster, more accurately on Geargrind Automatics. See how and why in this comprehensive catalog—just off the press. It tells how and why Geargrind Automatics give you

- greater variety of work
- operations never before possible
- an unmatched combination of features
- engineering service that's *really* helpful.

GEARGRIND Detroit

SEND TODAY

3925 Christopher, Detroit 11, Michigan

▲ For more details circle NED-422 F4 on enclosed inquiry slip ▲

INTERCOMMUNICATION SYSTEM
five or ten substation capacity

Master selective intercommunications system for use in large areas and to overcome high noise levels is available with five (illustrated) or ten substation capacities. Master station can talk and listen to any one substation or to all simultaneously. Optional feature permits substations to be connected privately or nonprivately and still originate calls to the master station. Once a conversation has been initiated with a nonprivate substation, persons at substations need operate no controls and can reply from a distance. Where system is connected privately, master unit cannot listen in on substations though they can reply when called and can originate calls. Made by **Talk-A-Phone Co.,** 1512-Q S. Pulaski Rd., Chicago 23, Ill.

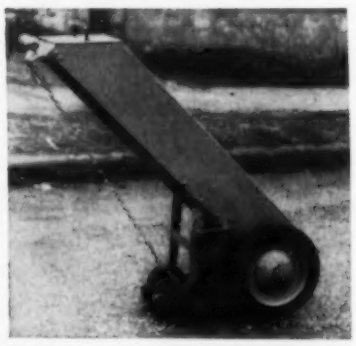
▲ For more details circle NED-423 F4 on enclosed inquiry slip ▲

PNEUMATIC HAMMER
7-in. tool weighs 3½ lb

Fitting the hand like a pistol, the Airmite air hammer weighs only 3½ lb and is 7 in. long. It is trigger-operated and has a recessed air control screw in the handle. Recoil is eliminated by fast reciprocation of the plunger. Hammer will not operate unless the tool is pressed against the work. Operation can be on air pressure as low as 40 psi, with consumption being 3.5 to 8 cfm. Variety of tools is available. Made by **Dotmar Industries, Inc.,** 527 Hanselman Bldg., Kalamazoo, Mich.

▲ For more details circle NED-424 F4 on enclosed inquiry slip ▲

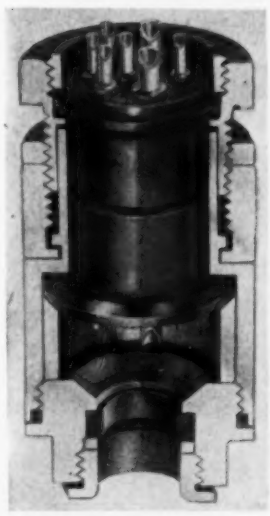
TRAFFIC LINE MARKER
line is printed by roller spreader



Traffic and safety lines are printed by all-metal, sled-type roller spreader of this gravity-fed, one-hand operated marker which can be used indoors and outdoors. Machine is noiseless and dustless. Receiving paint from gravity line, distribution apron feeds it evenly to finger rollers which make the impression. Flow is controlled. Marker can be used on any surface such as blacktop, macadam, concrete, asphalt or wood. Made by **Universal Yonkers Corp.,** Line Marker Div., 137N Alexander St., Yonkers 2, N. Y.

▲ For more details circle NED-425 F4 on enclosed inquiry slip ▲

ELECTRONIC CONNECTORS
with high dielectric properties



Featuring molded melamine inserts in an aluminum shell for high dielectric properties and mechanical strength, this lightweight electronic connector has leakage rated at less than 1 cu in. per hour at 30 psi. Contacts are gold plated over silver for easy soldering and corrosion resistance. Male contacts are brass, and female socket contacts are spring temper phosphor bronze. Neoprene rings make the unit pressure tight. Weight of the panel mounted receptacle is 0.5-oz and that of cable mounted plug is 1.5 oz. Made by **Gorn Electric Co.,** Gorn Electronics Div., 889 Main St., Stamford, Conn.

▲ For more details circle NED-426 F4 on enclosed inquiry slip ▲

Check Temperatures Instantly... Accurately with Alnor TYPE 1500 PORTABLE PYROMETER

Wherever temperature readings are required—on the production line, in the laboratory or in the field—this sturdy precision instrument can bring you instant, accurate results.

Here's Why

It's Fast . . . in operation and quickly read. Precision movement designed to laboratory standards. Direct reading scale face is easily understood—no slide wires or conversion tables necessary.

It's Accurate . . . consistently to within ¾ of one percent under almost all variable conditions. Sturdy, protective case assures continued accuracy in toughest portable service. Ten scale ranges available, from 0-400° to 0-3000°F. Equivalent Centigrade scales available at no extra cost.

It's Portable . . . compact size, 6½"x6"x3", and light weight make this pyrometer highly portable and easy to use anywhere. Write today for complete details and prices. Illinois Testing Laboratories, Inc., Room 529, 420 N. La Salle Street, Chicago 10, Illinois.

Send for Bulletin on 1500 Pyrometer.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-427 F4 on enclosed inquiry slip ▲

Operator sands down pips and rough spots before paneling passes between Pittsburgh brushes shown under exhaust hood.

Modern way to dust walls and ceilings

In producing wall and ceiling panels at the Barclay Manufacturing Co., New York City, dust caused by routing simulated "mortar lines" settles on the panels. The panels must be "dusted"—the dust *completely* removed—before they can be bake-finished.

Brushes originally used had a short life span, wore unevenly, and did so poor a job that many baked panels had to be completely refinished to pass inspection. Since even a "fairly good" brush would not do, Barclay searched for the *perfect* brush—and chose Pittsburgh! Result: Better work and costly refinishing eliminated!

WRITE TODAY for your free copy of our new booklet that shows, through actual case histories, how Pittsburgh can help cut your brushing costs. Address: Pittsburgh Plate Glass Co., *Brush Division,* Dept. W-4, Baltimore 29, Md.

PITTSBURGH *Power Driven* BRUSHES

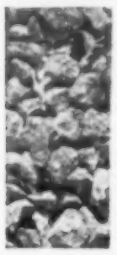
BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS • FIBER GLASS

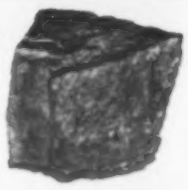
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

▲ For more details circle NED-428 F4 on enclosed inquiry slip ▲

Take NATURAL EMERY





it is STRONG
it is HARD and TOUGH
it is NON-BRITTLE
it is NON-ABSORBENT

Process NATURAL EMERY

crush it into PROPER SHAPES
screen it into PROPER SIZES
. . . and properly PROPORTION
the shapes and sizes into a *100 pound unit*

and you have
CORTLAND EMERY AGGREGATE
for making EMERI-CRETE FLOORING REG. U. S. PAT. OFF.
the superior, time-tested
3/4" HEAVY DUTY FLOOR

Let us send you the "*Romance of Emery*" or have our representative make a "no obligation" survey of your flooring problems.

WALTER MAGUIRE COMPANY, INC.
60 EAST 42nd STREET, NEW YORK 17, N. Y.
Detroit: 12147 Manor Ave. • *Washington, D. C.:* 500 Walker Bldg.
Chicago: 2817 E. 77th St.

▲ For more details circle **NED-429 F4** on enclosed inquiry slip ▲

tools that
Streamline
electrical maintenance

FOR ELECTRONIC TROUBLE SHOOTING

WESTON Model 785
Industrial Circuit Tester

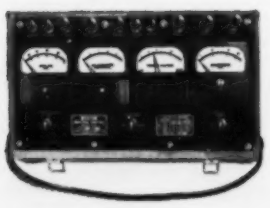
A multi-range, multi-purpose, ultra-sensitive analyzer, for laboratory and industrial checking of electrical and electronic circuits. Has 28 practical scale ranges; measures d-c and a-c voltage, d-c and a-c current, and resistance. Accessories available to extend ranges. Compact and portable; oak or steel case.

FOR MOTORIZED EQUIPMENT

WESTON Model 633
Clamp Volt-Ammeter

For convenient and rapid measurement of a-c voltage and current without breaking the circuit. Jaws take insulated or non-insulated conductors up to 2" diameter. Has 6 position thumb switch for range selection, and adjustable pointer stop for measuring motor starting current. Also available as a-c clamp ammeter, without voltage ranges.

FOR POWER PROBLEMS



WESTON MODEL 639
A-C Industrial Analyzer

A combination Voltmeter, Wattmeter, Power Factor Meter, Ammeter with all interconnections made. Only one hook-up required to measure a-c current, voltage and power in single and polyphase circuits, and power factor in 3 phase, 3 wire balanced circuits. Adequately insulated binding posts, high overload capacity.

AVAILABLE THROUGH LEADING DISTRIBUTORS

WESTON *Instruments*

WESTON Electrical Instrument Corporation
614 Frelinghuysen Avenue, Newark 5, New Jersey

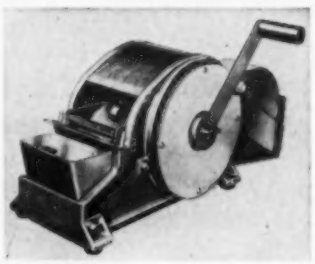
▲ For more details circle **NED-430 F4** on enclosed inquiry slip ▲

FLEXIBLE ABRASIVE WHEELS
developed for general purpose work

Mounted points, straight wheels, depressed center disks and cutoff wheels are available in line of flexible abrasive wheels developed for general purpose work. Designated Flextex, wheels consist of synthetic fibers bonded together with abrasive grains. They will rough and finish practically any material in one operation. Flexible nature absorbs shock, minimizes chatter and inhibits loading. Made by **Metal Removal Co.,** 1548 N. Orleans St., Chicago 10, Ill.

▲ For more details circle **NED-431 F4** on enclosed inquiry slip ▲

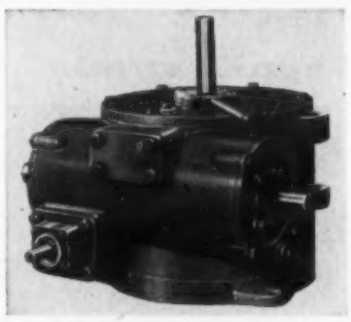
GUMMED TAPE DISPENSERS
two models handle 1 to 3-in. tape



Up to 30-in. lengths of gummed tape ranging from 1 to 3 in. wide can be dispensed in one stroke of model 15 and 152 dispensers. Both will accommodate Kraft gummed tape of any weight and have a spring clutch feed for tape length accuracy and a visual measuring scale. Model 15 illustrated employs a sheet tape roll compartment which can be folded into the dispenser body for shipment or storage. It can be equipped with an auxiliary water fountain and water heater or for dispensing light weight 35-lb gummed tape. Interlocking side frames contain the tape roll on the model 152 dispenser which also features adjustable tape length control, visual auxiliary water fountain and automatic cutting. Made by **Derby Sealers, Inc.,** Penton St., Derby, Conn.

▲ For more details circle **NED-432 F4** on enclosed inquiry slip ▲

INDEXING UNIT
cam operated unit is automatic



Automatic cam-operated indexing unit is designed to be built into machine drives to provide either precision positioning for production stations or a simplified timing method. Increments of either 8, 12, 16 or 20 indexes can be obtained during any cycle. All rotating shafts are mounted on tapered roller bearings for accuracy and cam shaft extensions provide a means for operating auxiliary drives or other production devices. Unit measures 17 in. long, 16½-in. wide and 13¾-in. high overall. It can be supplied with different drive assemblies to meet varying production requirements. Made by **Standard Tool & Mfg. Co.,** Dept. R, 740 Schuyler Ave., Lyndhurst, N. J.

▲ For more details circle **NED-433 F4** on enclosed inquiry slip ▲

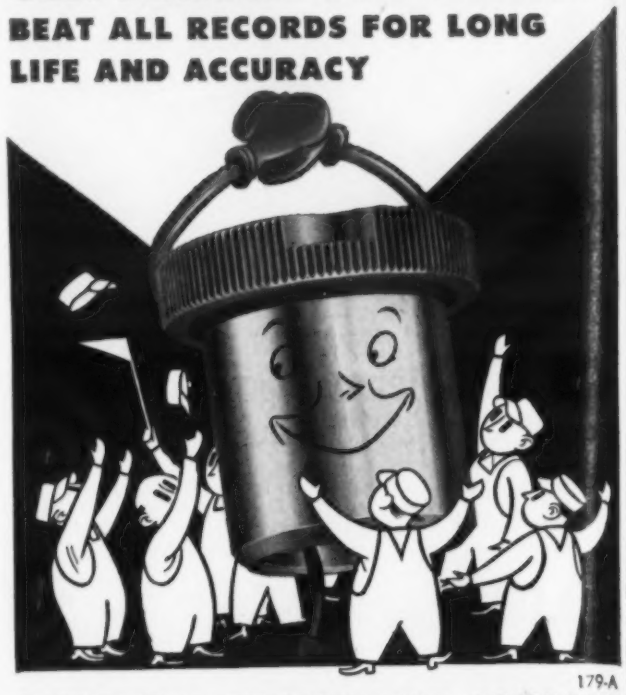
PACKAGING SCALE
electronic unit is automatic

Human error and fatigue are eliminated from packaging by the Pennsylvania electronic automatic packaging scale. To operate, weight of container and material is set on the tare beam and the container is placed under the fill line. When the solenoid valve is opened, material feeds until the predetermined weight is attained and the electronic circuit closes the valve. Depending upon material and containers, operator can use filling time to close containers, place them in a carton and preposition the next. Although designed for liquids, scale can be adapted to feed a wide range of granular and solid products by changing the feeding method. An explosionproof model is also available. Made by **National Store Specialty Co.,** Dept. PS-1, Bareville, Pa.

▲ For more details circle **NED-434 F4** on enclosed inquiry slip ▲

MEET THE CHAMP!

UNIVERSAL DRILL BUSHINGS BEAT ALL RECORDS FOR LONG LIFE AND ACCURACY



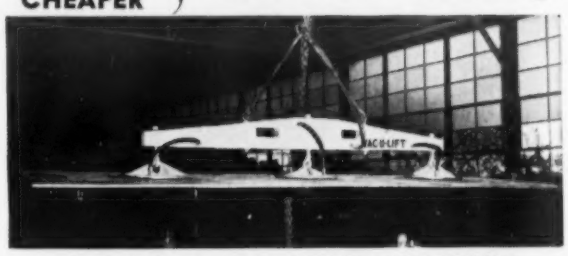
179-A

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

▲ For more details circle **NED-435 F4** on enclosed inquiry slip ▲

VAC-U-LIFT
Lifts Anything.....

FASTER
BETTER
CHEAPER
Materials Handling



OBSOLETES ALL OTHER METHODS

"Vac-U-Lift", the all purpose Material Handler is a time saver and money maker. It's so easy to use, so inexpensive to operate that other methods can't match it for efficiency and economy.

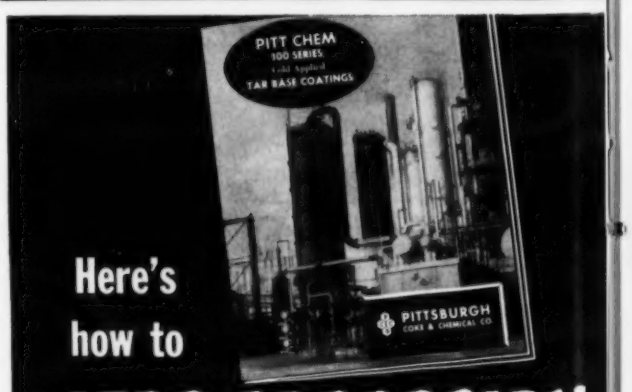
"Vac-U-Lift" lifts heavy objects without customary prying and blocking. "Vac-U-Pads" supply lifting power of approx. 1000 pounds each with ample safety factor. Many sizes and designs available, or we will build a unit to your specifications.

FREE illustrated literature gives complete details. Write today. (All Patent Rights Reserved)

BLAKESLEE VAC-U-LIFT

BLAKESLEE
MANUFACTURING CO., Inc.
SALEM, ILLINOIS

▲ For more details circle **NED-436 F4** on enclosed inquiry slip ▲



Here's how to
STOP CORROSION
in your plant!

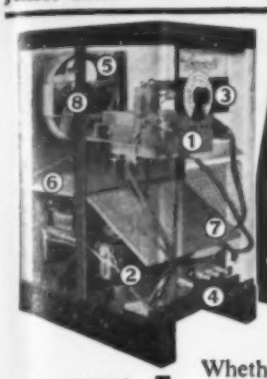
Don't let corrosion take a bite out of your investment in plant and equipment. Stop it now with Pitt Chem Cold Applied Tar Base Coatings. They're tough. They're durable. They're economical and easy to apply. No other material does such a complete job of protection at so little cost.

The free booklet shown above tells you how, where and when to apply Pitt Chem Tar Base Coatings.

Write for your free copy today! WAD 5013

PROTECTIVE COATINGS DIVISION
PITTSBURGH
COKE & CHEMICAL CO.
GRANT BLDG., PITTSBURGH 19, PA.

▲ For more details circle **NED-437 F4** on enclosed inquiry slip ▲



TODAY'S MOST ADVANCED D-C WELDER DESIGN

Makes D-C welding easier, more efficient than ever before . . . costs less to operate and maintain.

FEATURES

1. Efficient Rectifier.
2. Exclusive Transformer Design. No moving parts.
3. Calibrated current control.
4. Three current ranges.
5. Heavy Duty Cooling Fan.
6. Accessible primary.
7. Sturdy, safe cabinet.
8. Easy-grab lifting hooks.

Whether you operate one machine or many, the new Sureweld Rectifier Welder is your best D-C welder buy. It has no moving parts . . . nothing to wear out or cause noise. Operation is quiet, maintenance costs are almost negligible. Current adjustments are easy because you simply dial the current you want.

But most important, you get the one right welder for *your* job. That's because there are 5 different models to choose from, covering a current range of 2½ to 750 amps. Each model has safety flush-front construction, sturdy, drip-proof cabinet. See this new welder at your nearest NCG branch office or authorized dealer. Or write for Bulletin NH-114.

Copyright 1953, National Cylinder Gas Company

NCG NATIONAL CYLINDER GAS COMPANY
840 N. Michigan Ave., Chicago 11, Illinois

For more details circle NED-438 F4 on enclosed inquiry slip

For Easiest Pipe Work ...it's the New 20 RIDGID

8 sizes for pipe from ⅛" to 6"

More utility for your money in RIDGID Bench Vises

RIDGID Chain Bench Vise, ⅛" to 8"

• No wonder this bench yoke vise is popular everywhere! You can make the yoke open for either right or left hand. It has an integral pipe rest for easier cutting or threading . . . built-in pipe bender . . . strong special malleable yoke and base . . . LonGrip jaws of top quality tool-steel. You simply can't beat it for efficient easy operation that lasts for years! Buy it at your Supply House.

Same work-saver features in RIDGID post, kit and stand yoke vises and bench, post and stand chain vises.

See us at Western Plant Maintenance Show, Booths 639, 643.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO, U. S. A.

RIDGID Work-Saver Pipe Tools

For more details circle NED-439 F4 on enclosed inquiry slip

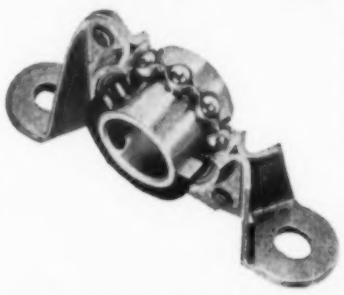
DUSTLESS BLAST CLEANER
brush confines dirt and abrasive

A uniformly clean surface free of rust, scale or dirt is produced by this Vacu - Blast Jr. dustless blast cleaning machine. Unit will clean either rough or smooth areas, prepare pitted surfaces and is highly practical for cleaning before and after welding or for spot cleaning before painting. Surrounding brush with vacuum pickup on blast gun confines all dirt and abrasive. Cyclone unit separates dust which is carried off to dust jar while abrasive is collected in bottom for re-cycling. Unit is mounted on stand equipped with casters and operates on any 105-cfm air compressor at air consumption rate of 88 cfm. Although designed for use with steel grit, cleaner can be used effectively with soft abrasives. Made by **Vacu-Blast Co.**, P. O. Box 885-NED, Belmont, Calif.

For more details circle NED-440 F4 on enclosed inquiry slip

BALL BEARING PILLOW BLOCKS
for low-speed light-load service

Available for shafts from ⅝ to 1¼-in. diameter, low-cost series JPS-200 ball bearing pillow blocks have pressed steel housings. Speed range is 0-1200 rpm. In the ⅝-in. shaft size, radial load ranges from 530 to 160 lb at 33⅓ to 1200 rpm. Single row bearing is self-aligning and retains full load capacity under minor shaft deflection or misalignment. Long inner ring distributes load evenly over a large shaft area. Bearings are lifetime lubricated and have a synthetic rubber lip-type seal. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.



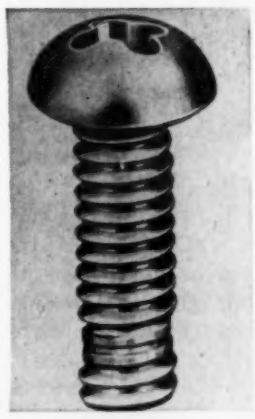
For more details circle NED-441 F4 on enclosed inquiry slip

PNEUMATIC TUBE CARRIER
handles tabulating machine cards

Mass transfer of tabulating machine or punch cards is possible with the Airtube carrier for pneumatic tube systems. It has no flaps or ends to turn. Remington Rand or IBM cards to be dispatched need only be slipped into a 7½-in. slot on one edge of the diamond shaped carrier. An internal spring clip holds up to 50 cards in place. Carrier travels at usual Airtube speed of 30 fps and is made for 4-in. tube systems. Made by **Lamson Corp.**, Dept. C18, Syracuse 1, N. Y.

For more details circle NED-442 F4 on enclosed inquiry slip

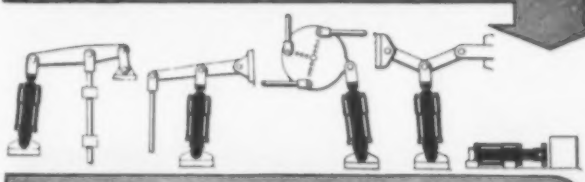
LOCK SCREWS
give secure interference fit



A typical use of Shakeproof root interference lock screws is holding rubber faucet washers without working loose. These screws make use of an enlarged root diameter on two threads, but maintain easy starting since the root interference is away from the screw end. Screws can be furnished in any standard size or material, with the interfering threads located anywhere on the shank. Samples and complete data are available from the maker, **Illinios Tool Works**, Shakeproof Div., 2503 N. Keeler Ave., Chicago 39, Ill.

For more details circle NED-443 F4 on enclosed inquiry slip

FOR THE 1001 JOBS



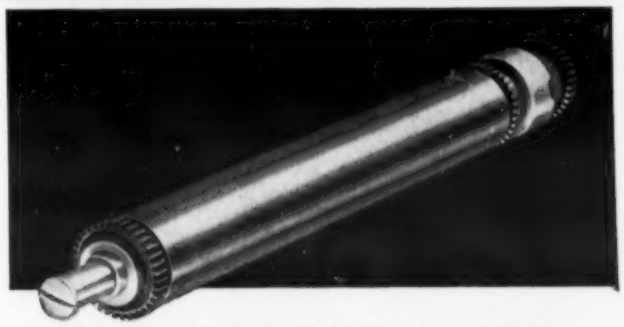
WHERE CYLINDER POWER IS BEST TO USE . . .

HANNA CYLINDERS ARE THE *FINEST* YOU CAN CHOOSE!

FREE! "27 Ways to Use Cylinder Power." Send for the New "Cylinder Power in Action" Bulletin!

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT — CYLINDERS — VALVES — RIVETERS
1759 Elston Avenue • Chicago 22, Illinois

For more details circle NED-444 F4 on enclosed inquiry slip



OUT OF AN IBM BUSINESS MACHINE POPS THIS TUBING IDEA FOR YOU

This is the contact roll of an IBM Collator—which performs electronic sleight-of-hand with 240 punched cards per minute! Steel fingers that sort the cards give the roll a high-speed workout. And it must resist corrosion and be a good electrical conductor. IBM employs Superior WELDRAWN* Beryllium Copper and low carbon steel composite tubing for the roll because it meets tight specifications for wear resistance, peak hardness and conductivity. Chances are this tubing—or one of our more than 55 other analyses—will meet *your* requirements for equally critical applications. Send for free Technical Bulletin #7-2 and tell us about your tubing needs.

*Reg. U.S. Pat. Off.

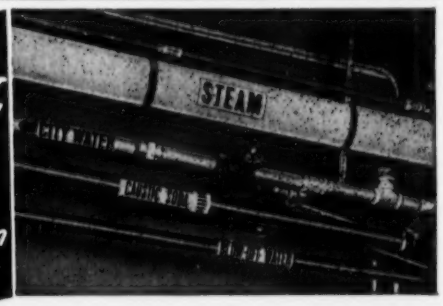
All analyses .010" to ⅜" O.D.
Certain analyses in light walls up to 2½" O.D.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

Superior Tube
THE BIG NAME IN SMALL TUBING

For more details circle NED-445 F4 on enclosed inquiry slip

FASTER, LOWER COST, BETTER Pipe Identification with



Brady Pressure-Sensitive Markers

You also get NEW BLUE STREAK RELEASE COATING
Positively eliminates tugging, twisting, tearing, distortion. Markers come right off the card for fastest peel-to-apply time ever!

It's more efficient, safer, thriftier to mark *what* flows *where*—with Brady Pressure-Sensitive Pipe Markers. Off dispenser card in a hurry—on the pipe to *stay* and be *seen* . . . for real savings in material cost and application time. *Background color and legend-overprint combinations meet A.S.A. Standard A-13.* And Brady Markers are Silicone-coated to stay clean, highly visible. A wide assortment of standard markers—or we'll make any kind, with any legend, to your exact order! For *free* samples, useful literature, write—

W. H. BRADY COMPANY
716 W. Glendale Ave., Milwaukee 12, Wis.

BRADY NO. 1 NAME • NO. 1 SOURCE
Pressure-Sensitive Industrial Products

For more details circle NED-446 F4 on enclosed inquiry slip

unique new "extra secretary"

acclaimed by executives

WHEELER

SOUND POWERED Electric TELEPHONES

- NOW AVAILABLE as a modern, streamlined, executive desk cradle-phone.
- NO BATTERIES. NO OUTSIDE POWER. No maintenance.
- Easily installed. Ideal "private wire" to save time, steps, cut switchboard load.

Write now for detailed Bulletin SA-32.

the WHEELER INSULATED WIRE CO., INC.
Division of The Sperry Corporation
1108 East Aurora Street, Waterbury 20, Connecticut
7WHB4A

For more details circle NED-447 F4 on enclosed inquiry slip

COUNTING the pulse of INDUSTRY

Productimeters register accurate count of every unit processed . . . eliminate profit-eating losses . . . insure economical plant operation and maximum use of man-hours. There's a size and style to suit every need.

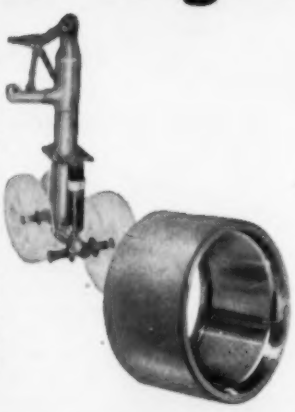
Send for Catalog No. 101

DURANT MANUFACTURING CO.
1922 N. Buffum Street
Milwaukee 1, Wis.
122 S. Water St.
Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS 75th ANNIVERSARY
Count Everything

For more details circle NED-448 F4 on enclosed inquiry slip

Laminates for high strength-to-weight



- Strength and light weight are two advantages of *Synthane* laminated plastics. Because of these properties *Synthane* is widely used in aircraft construction, ball bearing retainers, and many similar applications. *Synthane* also has high dielectric strength, chemical resistance, and dimensional stability.

Synthane is supplied in sheets, rods, tubes, special shapes and fabricated parts and in a wide choice of grades to meet design requirements. The coupon will bring you full information.

SYNTHANE
SYNTHANE CORPORATION
N. E. RIVER ROAD, OAKS, PENNA.
Manufacturers of laminated plastics
Please send me more information about *Synthane*.
Name_____
Company_____
Address_____
City_____ (zone)_____ State_____

For more details circle NED-449 F4 on enclosed inquiry slip

THROATLESS SHEAR
air power unit makes any type of cut

Straight, curved or irregular cuts can be made in mild steel up to 3/16-in. thick and in stainless steel up to 10-gage by this pneumatically operated throatless shear. The high production unit operates on shop air pressure of from 60 to 100 psi. Length and speed of stroke can be adjusted by positioning the movable switch contact arms. Power stroke and power return are controlled by a solenoid operated four-way valve. The heavy duty air cylinder meets JIC pneumatic standards. A muffler makes the shear virtually noiseless. Made by **Beverly Shear Mfg. Co.**, 3001 W. 111th St., Chicago 43, Ill.

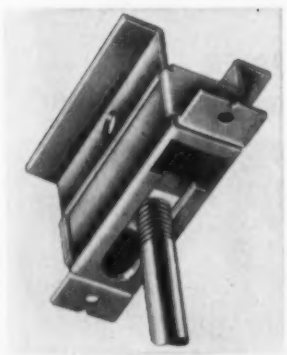
For more details circle NED-450 F4 on enclosed inquiry slip

TELEVISION CAMERA
closed circuit industrial type

Compact model 300-BV closed circuit industrial television camera requires low lighting level and has high resolution. It is simple and can be used by untrained personnel. Interchangeable with the standard model 300-b Utiliscope camera, it can be placed in any location for viewing dangerous or inaccessible operations, serving one or more viewing screens located wherever desired. Made by **Diamond Power Specialty Corp.**, Lancaster, O.

For more details circle NED-451 F4 on enclosed inquiry slip

DUCT & PIPE HANGER
for inserting in concrete



Spot concrete insert is designed for quick suspension of piping, conduit or other duct work and will take any square or hex head nut, bolt or hanger up to ½-in. and support up to 1000 lb. Centered side holes take reinforcing rods up to ⅜-in. and drilled holes are provided for quick nailing into wood forms. Keyhole slot permits 2-in. hanger adjustment. Inserts are 4 5/16-in. long and 2½-in. wide. They are made from 12-gage cold rolled steel and are either unfinished, galvanized or green enameled. Made by **Unistrut Products Co.**, Dept. 75, 1013 W. Washington Blvd., Chicago 7, Ill.

For more details circle NED-452 F4 on enclosed inquiry slip

THICKNESS GAGE
measures wide variety of materials

Thickness of electroplated cadmium, copper, brass, silver, zinc, tin, lead, nickel, zinc-tin and lead-tin alloys on steel, as well as hot dipped tin and zinc can be measured by the pocket-size Handi-Gage. It can also be used to determine the thickness of paint, plastic lamination, enamel and lacquer coatings on steel. Similar in size and shape to an automobile tire gage, it will test thicknesses from 0.0001 to 0.015-in. Magnetic end of the gage is applied vertically to the surface and pulled slowly away. The distance a calibrated stem travels before the magnet releases itself from the surface is a measure of the thickness. Instrument weighs 6 oz and is available with extra magnets for various thickness ranges. Made by **Platers Research Corp.**, Dept. 50, 59 E. Fourth St., New York 3, N. Y.

For more details circle NED-453 F4 on enclosed inquiry slip

Use MONORAIL CRANES

- WHERE SPACE IS LIMITED
- TO HANDLE VARIABLE JOBS
- FOR LOW MAINTENANCE COSTS

These are just a few reasons why American MonoRail Cranes are being installed in an ever-increasing number of plants. Your American MonoRail representative will tell you more about MonoRail Cranes—ease of handling—smooth travel—strength—safety interlocks—power operation and *interlocking carrier service between and beyond the craneways.* This information is available without obligation.

SEND FOR YOUR COPY C-1 BULLETIN

AMERICAN MONORAIL COMPANY
OVERHEAD HANDLING EQUIPMENT
13116 ATHENS AVENUE • CLEVELAND 7, OHIO

For more details circle NED-454 F4 on enclosed inquiry slip

Mix fluids FAST

Cheaper than by hand

Save time, money, on any job where you must:

1. Mix, blend, or stir fluids
2. Wash, suspend, or dissolve solids
3. Disperse gases in liquids

Mix rapidly, thoroughly with a LIGHTNIN Portable Mixer. Just clamp it on open tank or container. No baffles necessary.

Uniformity — in seconds

Costs much less than hand stirring —because it mixes so fast. Turns over tank contents rapidly from top to bottom, while rotating them around and around. Gives you complete uniformity, often in a few seconds.

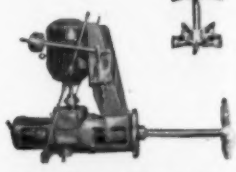
Fully guaranteed to do an efficient mixing job for you, or your money back. Thousands in use everywhere. Many in service over 20 years.

Thirty models to choose from—⅛ to 3 HP. Electric and air motor types. Direct or gear drive.

Send today for illustrated Catalog B-108 and prices.

FOR PERMANENT MOUNTING
Propeller mixers for open tanks, closed pressure vessels. Sizes ¼ to 3 HP. Send for Catalog B-103.

FOR BIG MIXING JOBS
Turbine and paddle mixers for open or closed tanks. Sizes 1 to 500 HP. Send for Catalog B-102.

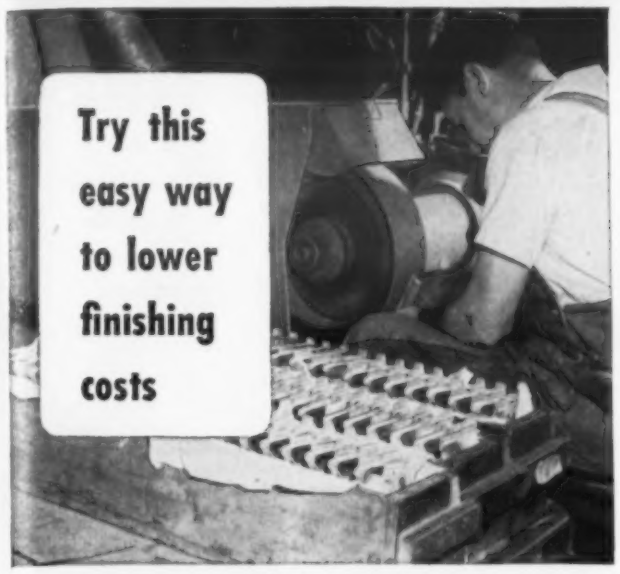


FOR VERY LARGE TANKS
Side entering propeller mixers. Sizes 1 to 25 HP. Send for Catalog B-103.

Lightnin® Mixers

MIXING EQUIPMENT Co., Inc.
165-f Mt. Read Blvd., Rochester 11, N. Y.
In Canada: William & J. G. Greey, Ltd., 100 Miranda Avenue, Toronto 10, Ont.

For more details circle NED-455 F4 on enclosed inquiry slip



If you grind, smooth or polish metal, wood, leather, rubber or plastic products, investigate the finer finishing qualities of Jewel Brand Velvet Joint Abrasive Belts. For once you've tried them, you'll find that sharper, tougher Jewel Brand Belts not only cut cleaner, faster and smoother, but actually last longer . . . reduce downtime . . . save time and labor on job after job. Prove this for yourself. Let an experienced Jewel Brand Abrasive Engineer help you select the *right* belt for your finishing operation now. Write for details. Abrasive Products, Inc., 525 Pearl Street, South Braintree 85, Mass.

JEWEL BRAND
coated **ABRASIVES**

▲ For more details circle **NED-456 F4** on enclosed inquiry slip ▲

New

usalite

DUO-FLEX
Only Industrial Flashlight with Built-in DUAL LIGHTING SYSTEM!

Flexible Extension Probe Light *PIN-POINTS* Light Where You Want It

Extends 10½" beyond flashlight—reaches around corners, in deep recesses, through small clearances—gets into all hard-to-get-at dark spots inaccessible with ordinary flashlights. Ideal for close inspection of products and machinery.

No. DF-22
2 CELL
*REG. PAT. U.S. & CAN.

All These Extra Advantages!

Powerful fixt focus bulb and reflector throw 1,000 foot beam for long range lighting; red "danger zone" lens ring; heavy-walled plastic case; detachable end cap with spare bulbs and snap-back ring; 3-way safety switch.

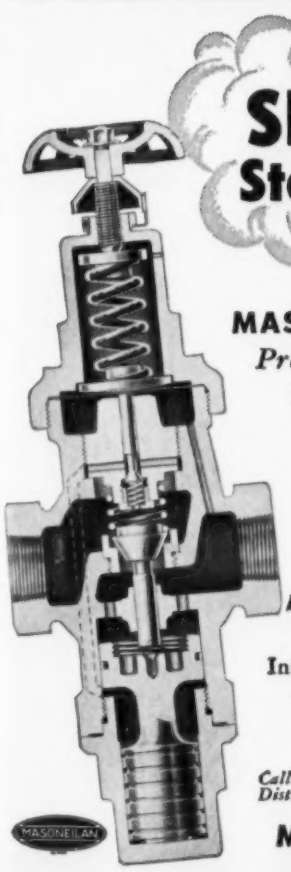
Order Duo-Flex from your local distributor or write for descriptive sheet.

U. S. ELEC. MFG. CORP.
222 West 14th Street, New York 11

USALITE Flashlights and USALITE Leak-Proof Copper-Sealed Batteries

▲ For more details circle **NED-457 F4** on enclosed inquiry slip ▲

FOR SENSITIVE Steam Control



MASONEILAN No. 11
Pressure Reducing Valve

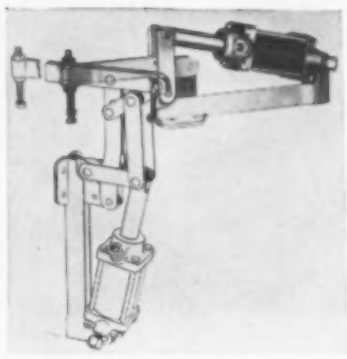
Experience proves this is the most accurate, dependable steam reducing valve in its class. Responds instantly to smallest variations. Superfinished stainless steel vital parts prevent sticking or corrosion.
Users report maintenance consists of *little more than keeping the moving parts clean.*
All parts may be removed with valve in the line.
Initial pressures up to 250 lbs., reduce pressures 10-90 or 75 to 225 lbs. Sizes ½" to 2" with bronze body. (Also available in iron and steel.)

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN
REGULATOR CO.
1189 Adams St., Boston 24, Mass.

▲ For more details circle **NED-458 F4** on enclosed inquiry slip ▲

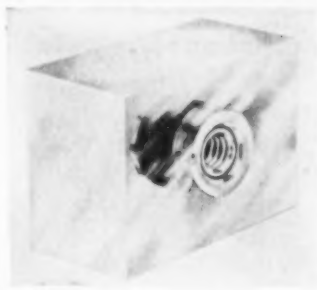
AIR-OPERATED CLAMPS work "around corners"



Air-operated toggle clamps are usable in situations where space in the horizontal plane is limited. They can be mounted in a vertical position alongside the work but at a lower level. Double toggle action arm swings in a 45-degree arc "around the corner" over the work to make spindle contact for clamping. Clamps are designated series AODT. Made by **Lapeer Mfg. Co.**, 3058 Davison Rd., Lapeer, Mich.

▲ For more details circle **NED-459 F4** on enclosed inquiry slip ▲

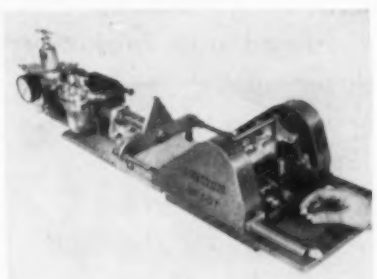
BLIND EXPANSION FASTENERS neoprene sleeve cushions grip



Designed for use in construction and building fields, Neo-Grip blind expansion fasteners are used where there is access to only one side of the material and feature a neoprene gripping sleeve which provides cushioned holding pressure. This permits use in soft and fragile materials including fibers, gypsums, plaster and plaster board, asbestos, cork and plastics, as well as in glass, ceramics, masonry and metals. Type P110 fastener is 7.16-in. long and ½-in. OD. Model P125 is ½-in. long and measures 9/16-in. OD. Both can be used in thin materials, minimum thickness for P110 being ⅜-in. and for P125, ½-in. Simple installation is another feature. Made by **Star Expansion Products Co.**, Dept. N, 147 Cedar St., New York 6, N. Y.

▲ For more details circle **NED-460 F4** on enclosed inquiry slip ▲

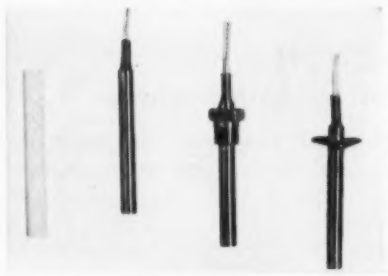
COLOR PRINTER & FILLER operates on 75-psi air supply



Color inks or enamels are applied to depressed or sunken designs and lettering by the Acroprinter 507 color filling and printing machine many times faster than with hand operated model. Machine operates on air supply of 75-psi or more. Aside from printing unit which is an improved version, machine is entirely new. It will also print nameplates, signal parts, ornaments, emblems, novelties and machine parts made of metal or plastic at speeds from 15 to 120 per minute. Printing inks are available for use on any material and in any color. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ For more details circle **NED-461 F4** on enclosed inquiry slip ▲

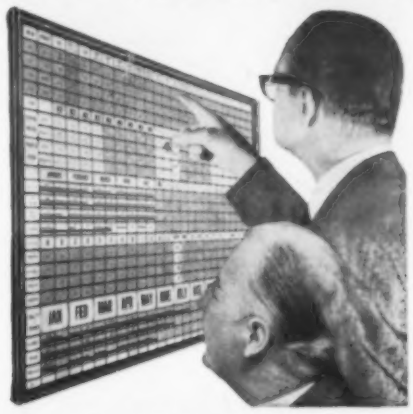
MIDGET THERMOSTATS two-wire type have ¼-in. diameter



Precision midget thermostats are ¼-in. diameter and about 2⅜-in. long. These Thermoswitches can be used, with suitable relay circuit, as a temperature controller in any heated device where installation space is limited. Typical uses are overheat detectors in high speed machine bearings, ovens, oil pumps, platens and heater ducts. Unit is stable under shock and continuous vibration and is factory-set to actuate at any selected temperature in the range from −65 to 450° F. Accuracy is 1 to 5° F, depending upon set point. Models with three mounting arrangements are available, all designed for 1-amp service at 115 v ac or 32 v dc. Electrical contacts close when external temperature rises to the actuation temperature. Regular-action models will be available shortly. Made by **Fenwal Inc.**, 70 Pleasant St., Ashland, Mass.

▲ For more details circle **NED-462 F4** on enclosed inquiry slip ▲

GRAPHIC VISUAL CONTROL



THE BOARDMASTER SYSTEM

★ Graphic Picture of Your Operations—Spotlighted by Color
★ Facts at a Glance—Saves Time and Eliminates Confusion
★ Simple and Flexible—Easily Adapted to Your Operations
★ Easy to Operate—Type or Write on Cards, Snap on Board
★ Ideal for Production, Scheduling, Inventory, Traffic, Etc.
★ Compact, Attractive. Made of Metal. Over 50,000 in use.

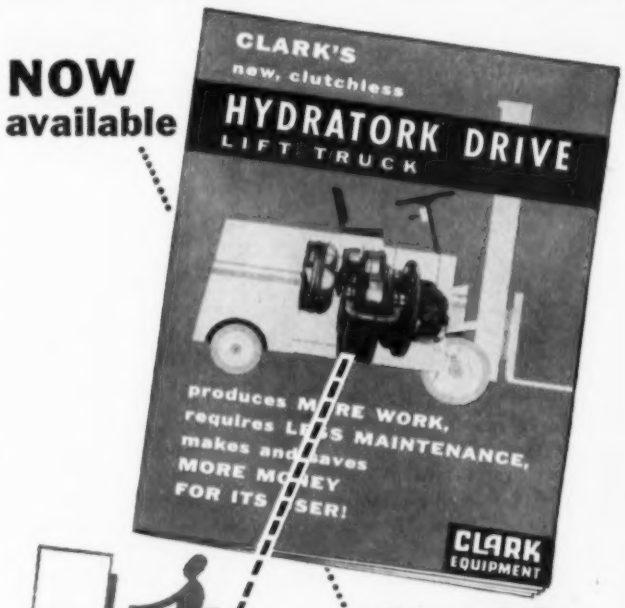
Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-300 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36

▲ For more details circle **NED-463 F4** on enclosed inquiry slip ▲

NOW available



Clark's HYDRATORK DRIVE Carloader

Send for FREE booklet

The revolutionary HYDRATORK DRIVE lift truck is now available in Clark's 3000-5000 lb. Carloader. The new clutchless, torque converter transmission has already won many friends among users of Clark's 6000-7000 lb. Utilitrucs. The basic benefits of this Clark-built transmission are:

1. **Lower cost:** no gear clash, no clutch problems, excellent serviceability.
2. **More power:** faster, smoother get-away; better gradability.
3. **Less driver fatigue:** finger-tip direction control, no clutching or shifting.

The free booklet shows detailed dis-assembled views of the HYDRATORK DRIVE, explains how it works. Clip the coupon to your company letterhead and we'll send it to you.

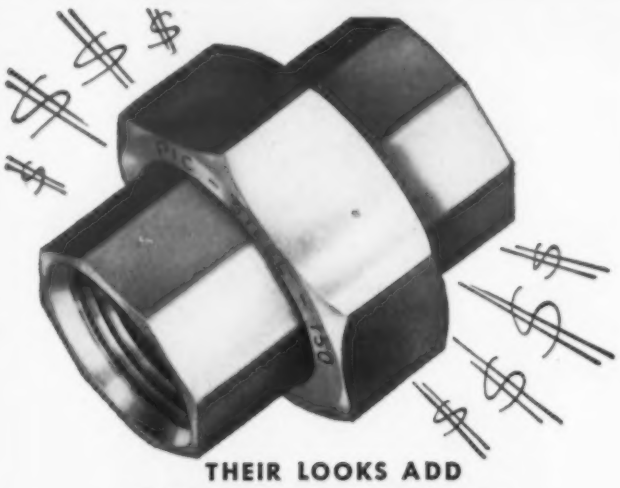
CLARK EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan

☐ Send HYDRATORK DRIVE booklet

Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle **NED-464 F4** on enclosed inquiry slip ▲



THEIR LOOKS ADD

SHOWROOM "SELL"!

PIC STEEL UNIONS

Preferred for Original Equipment

Because of their smart brightness, Pics help the sale — never hinder it. Ends consist of tough, steel pipe coupling stock — with uniform flat sides for speedy installing with open end wrenches. Special wedge type bronze seat assures a tight closure *always*. All steel surfaces, even threads are zinc plated to prevent rust. Ask for Pic, the union for 150 lb. service that costs *less* than a galvanized, no more than a black malleable union.

Write for Free Samples!

DART UNION COMPANY, 132 Thurbers Ave., Providence, R. I.

▲ For more details circle **NED-465 F4** on enclosed inquiry slip ▲

ELECTROPUNCH stakes terminals to insulators TWICE AS FAST!

In this strict quality control operation at Cambridge Thermionic Corporation, ELECTROPUNCH—the all-electric impact hammer—has slashed production time *and unit cost* in half! Main reason for the speed-up: ELECTROPUNCH delivers instant, controlled impacts at a faster rate than the equipment previously used, *and* without requiring time to build up pressure! ELECTROPUNCH also *reduced spoilage* resulting from staking these ceramic insulators at inadequate or excessive pressures.

Delivers impacts up to 10,000 lbs. — up to 125 blows per minute! Economical to buy, operate and maintain.

Write, or phone Bigelow 4-6370 for folder showing complete line of Black & Webster tools.

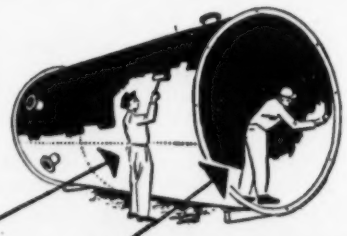
BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.

Solenoid-operated Production Tools

▲ For more details circle **NED-466 F4** on enclosed inquiry slip ▲

Gaco has the two correct approaches to your corrosion problems



N-700*

Maintenance Coating
Protects against ALL FUMES

N-200-1

Heavy duty Liquid Lining
means peak IMMERSION SERVICE

Nothing else protects like GACO Neoprene —real rubber in a can.

Gaco authorized Neoprene Application Shops.

For your *additional* service completely equipped shops and trained personnel are located in every large industrial center to apply GACO Neoprene to your tanks and other equipment.

*Patent applied for.

Send me all the facts about genuine Neoprene Corrosion Protection.

Name _____

Company _____

Address _____

GATES ENGINEERING COMPANY

100 S. West St. • Wilmington, Delaware

The pioneer maker of Neoprene protective coatings and linings.

▲ For more details circle **NED-467 F4** on enclosed inquiry slip ▲

PACKAGED BOILER
offered in sizes from 15 to 40 hp

Light oils are burned without difficulty by the model CB packaged boiler which features a Fireye electronic combustion safety control. Self-contained unit is made in small units of 15 to 40 hp capacity for processing or heating, steam or hot water use. Operation and maintenance are facilitated with easy-to-open hinged doors at front and rear. Unit will burn gas or oil and can be converted from one fuel to the other in less than 1 minute. Models with 50 and 80 hp capacities will be available shortly. Made by **Cleaver-Brooks Co.,** Dept. NED, 326 E. Keefe Ave., Milwaukee 12, Wis.

▲ For more details circle **NED-468 F4** on enclosed inquiry slip ▲

WEIGHING & FILLING MACHINE
rate is up to 20 packages/minute

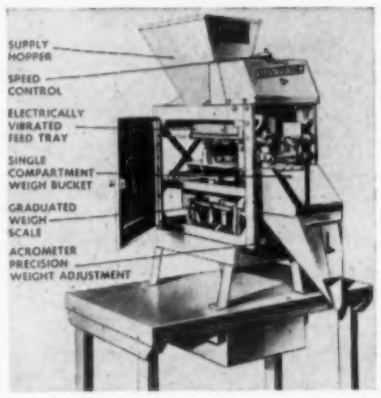
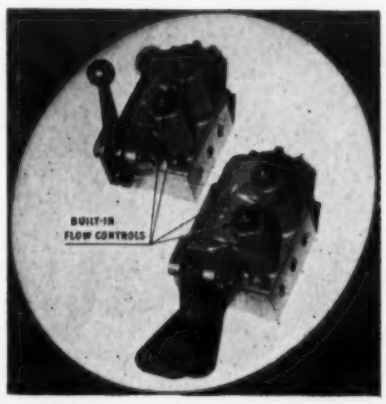


Table model Elec-Tri-Pak weighing and filling machine is semiautomatic type designed to fill any container with most types of dry, relatively free-flowing products. Highly accurate, machine will weigh and fill up to 20 packages a minute. Features include vibratory feed tray, controlled beam weigh scale, single compartment weigh bucket, speed control and precision weight adjustment. Units are offered to handle weight range from 2 oz to 15 lb. Made by **Triangle Package Machinery Co.,** 6663 W. Diversey Ave., Chicago 35, Ill.

▲ For more details circle **NED-469 F4** on enclosed inquiry slip ▲

FOUR-WAY VALVE
hand and foot operated type

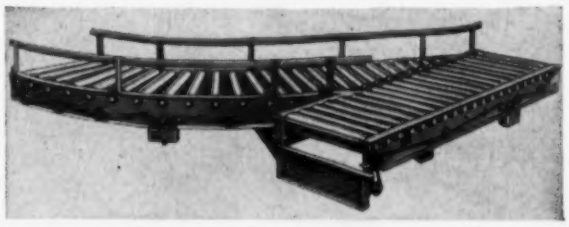


Double-acting air or hydraulic cylinders can be controlled by this hand and foot operated four-way valve with built-in full capacity flow control meters of the venturi type. Air and low pressure hydraulic unit features one balanced spool using renewable O-ring packing. Basic valve is available for remote pilot operation, cam, single or double solenoid, together with time-delay features. Four sizes, 1/4, 3/8, 1/2 and 3/4-in., are offered in 0-150 lb pressure range. Made by **Airmatic Valve, Inc.,** 7317-A Associate Ave., Cleveland 9, O.

▲ For more details circle **NED-470 F4** on enclosed inquiry slip ▲

CONVEYOR Y-SECTION
unit is driven by 1/2-hp motor

Compact power-driven Y-unit eliminates clogging on converging conveyor lines. It consists of 90-degree curve and 5-ft long straight section, both of which



are chain driven by single 1/2-hp gearhead motor through universal joints. Unit offers speeds up to 90 fpm and can be incorporated in all types of package conveyor lines, whether on the floor or suspended from the ceiling. Transparent plastic safety guards cover moving parts. Made by **Harry J. Ferguson Co.,** 115 West Ave., Jenkintown, Pa.

▲ For more details circle **NED-471 F4** on enclosed inquiry slip ▲

REDUCE YOUR COST OF RADIAL HOLE DRILLING

A Standard Machine Designed for Variety Production

Why build a special machine for drilling radial holes when a standard machine equipped with Govro-Nelson Automatic Drilling Units will, in many cases, perform the work of a special machine that would cost considerably more!

Any number of drilling units up to eight may be employed, the units being movable not only through 360 degrees on the circular table but also movable endwise on riser plates.

The machine may also be used for tapping operations with Govro-Nelson Tapping Units. It has a range of 1/32" to 3/8" on drilling operations and 0.80 to 3/8-16 on tapping operations, depending on material and spindle speeds. Literature on request.

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

Automatic **DRILLING UNIT**

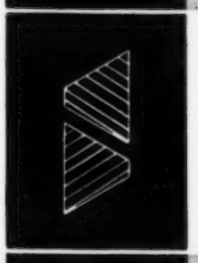
▲ For more details circle **NED-472 F4** on enclosed inquiry slip ▲

Pick your valve and pump packing

ALL TEFLON • ALL LOW FRICTION LOAD • ALL-CHEMICAL RESISTANT

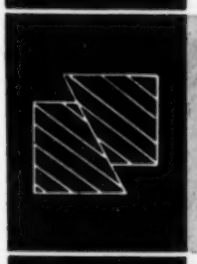
Chemiseal V-Type Packing

Made of low friction, chemically inert TEFLON, its distinctive tapered V design offers greater flexibility and resiliency. Provides necessary seal at low gland pressure, reducing torque required to operate manual, air or motor-operated valves.



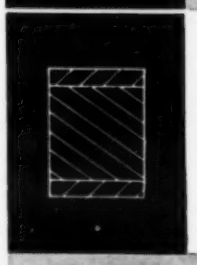
Chemiseal Cup-and-Cone Type Packing

A ruggedly constructed TEFLON Packing for both hand and mechanically-operated valves. When pressure is applied to this cup-and-cone packing, the cones deform inwardly to effect a seal at the spindle, while the cups expand outwardly against the stuffing box—resulting in a tight seal with minimum friction on the valve stem.



Chemiseal Wedge-Type Packing

This TEFLON Packing is designed to offer the unusually low gland pressure required for use in valves made of such materials as ceramics, Haveg, Karbate, glass-lined steel, etc. Offering many of the advantages of soft packings—plus the chemical resistance of TEFLON—it also provides space for thermal expansion and is adaptable to spring loading.



Chemiseal Pump Packing

Made in three types—pure TEFLON, TEFLON with Graphite and TEFLON with Mica. Handle all types of corrosive materials including hazardous chemicals. Ideal for non-contaminating service in the manufacture of pharmaceuticals, biologicals, foods, etc.

• Ask for Bulletin TP-1053.

UNITED STATES GASKET COMPANY

CAMDEN 1 • NEW JERSEY
FABRICATORS OF duPont TEFLON, Kellogg KEL-F AND OTHER PLASTICS
Representatives in Principal Cities Throughout the World

▲ For more details circle **NED-473 F4** on enclosed inquiry slip ▲

ENGINEERED CONTAINERS FOR EVERY SHIPPING NEED

General Box

1859 Miner Street, Des Plaines, Illinois

★ ★ ★ ★ ★

▲ For more details circle NED-474 F4 on enclosed inquiry slip ▲

These hands are priceless
Keep them working with

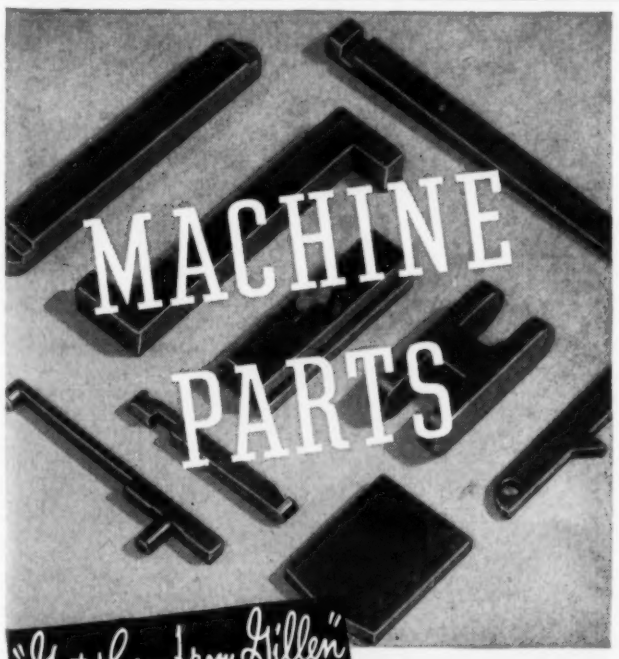
JOMAC HAND-GUARDS

Industrial plants throughout the country report that Jomac Hand-Guards—used on bare hands, over gloves, or in place of leather hand pads—give sure protection, keep workers on the job.

Jomac Hand-Guards—made from job-tested twisted loop Jomac Cloth, which cushions the hands and prevents injuries from rough surfaces, sharp edges and bruising shocks—are available in a number of different styles with or without a grease and oil-resistant rubber lining. Write for our catalog. Ask about a trial order. C. WALKER JONES Co., Philadelphia 38, Pa. *Plants in Philadelphia, Pa., and Warsaw, Ind.*

JOMAC
INDUSTRIAL GLOVES
outwear ordinary gloves by 700%

▲ For more details circle NED-475 F4 on enclosed inquiry slip ▲



"Get them from Gillen"

SPECIAL Machine Parts or Keys, square or flat, with special milling, drilling, tapping, countersinking, counterboring or surface grinding. Various metals, finished to specifications. Write for catalog or send your blueprints for quotation.

John Gillen Company INC

2562 S. 50th Ave, Cicero 50, Ill.

GROOVE PINS • MACHINE KEYS • TAPER PINS • MACHINE PARTS • WOODRUFF KEYS

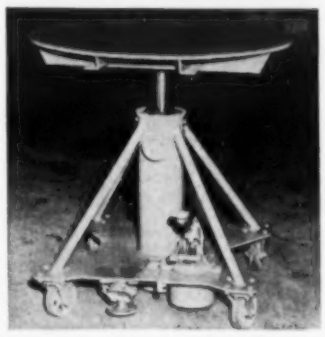
▲ For more details circle NED-476 F4 on enclosed inquiry slip ▲

ADJUSTABLE DRILL
now available in 1 to 2-in. size

Adjustable drill furnished with two sets of blades cuts holes from 1 to 1½ and from 1½ to 2-in. diameter in infinitely adjustable increments. A standard drill is used to make a pilot hole of at least ¾-in. diameter first. Both high speed steel and carbide tipped blades are available. A scroll ring both adjusts blades and supports them against cutting thrusts. Tool can be used in drill presses, radial drills, lathes and other machine tools and is specially suitable for toolroom work. Blades are readily modified to produce round corners, steps, angular surfaces and other shapes. Made by **Hayden Twist Drill Co.**, Dept. B, 8626 Lyndon Ave., Detroit 38, Mich.

▲ For more details circle NED-477 F4 on enclosed inquiry slip ▲

ELEVATING-REVOLVING TABLE
serves converging conveyor lines



Problem of providing an adjustable table that can be turned and elevated to serve several conveyor lines of varying heights is solved by this revolving top elevating table. Top revolves freely or can be locked in a single position and can be fixed at any height between 28 and 44 in. Capacity is 2000 lb. Table is portable, but can be held in position by a floor lock. Hydraulic raising and lowering is controlled by foot pedals on the pump which is mounted on the base of the table. Made by **Raymond Corp.**, 41-121 Madison St., Greene, N. Y.

▲ For more details circle NED-478 F4 on enclosed inquiry slip ▲

REFUSE WAGON
has replaceable washable bag

Designed for use in industrial and service plants, Janitor service wagon is equipped with a washable and replaceable white canvas or olive drab bag for rubbish or refuse. Bags have metal grommets and drawstrings so that they can be closed when full and removed from frame. Spring-steel frame collapses into small space when not in use and is available with either two hard composition casters or four Neoprene rubber wheels. Wagon measures 20 x 19 x 43 in. with bag open. Made by **Meese, Inc.**, 5 Michaels St., Madison, Ind.

▲ For more details circle NED-479 F4 on enclosed inquiry slip ▲

CATALYTIC MUFFLER
for 4-cycle diesel engines

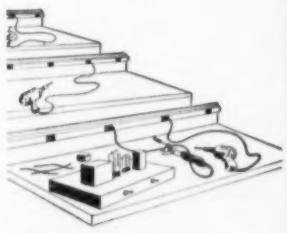
Noxious and irritating exhaust components from 4-cycle diesel engines are effectively reduced by the Dieseler catalytic muffler which attaches directly to engine exhaust manifold. Catalytic process also eliminates much of the heavy smoke and strong odor characteristic of diesels. Prototype units tested in the laboratory on engines loaded to simulate work cycles of trucks, busses, tractors and locomotives eliminated 65-85 per cent of irritating hydrocarbons and 80-90 per cent of carbon monoxide. Made by **Oxy-Catalyst, Inc.**, 115A S. Conestoga Rd., Wayne, Pa.

▲ For more details circle NED-480 F4 on enclosed inquiry slip ▲

▲ For more details circle NED-481 F4 on enclosed inquiry slip ▲

PLUGMOLD provides PLENTY of OUTLETS for Power Tools!

ready-wired continuous outlet system makes your plant production more efficient



INSTALL PLUGMOLD along work benches in your plant — and end the inefficiency and hazards of makeshift extension wiring . . . Plugmold provides plenty of closely-spaced Duplex or NEMA grounded outlets for power tools, testers, heaters and other production devices. Write for the Plugmold booklet.

PLUGMOLD

fastest, easiest, cheapest way to more electrical outlets

Rely on Wiremold's "Big 4" to solve your wiring problems! Plugmold Continuous-Outlet Systems — Wiremold Surface Raceways — Pancake Overfloor Raceways — Wiremold Fluorescent Units

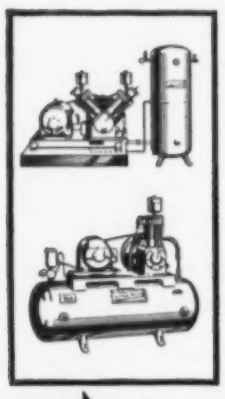
The WIREMOLD COMPANY
HARTFORD 10, CONNECTICUT

Wiremold products are backed by a firm guarantee.
See page 7 of Wiremold Catalog No. 19.

▲ For more details circle NED-482 F4 on enclosed inquiry slip ▲

MORE FREE AIR PER HORSEPOWER

Kellogg-American



AIR COMPRESSOR PUMPS, ⅓ TO 20 HP
Engineered and precision built to give more *free air* (actual air delivered) per hp, Kellogg-American compressors assure maximum air delivery, efficiency and service life. Single or two stage, 1, 2 or 4-cylinder units available for pressures up to 200 psi; displacements to 105.9 c. f. m.

COMPLETE AIR COMPRESSORS, ⅓ TO 20 HP
Portable or stationary; skid, remote tank or tank mounted; electric motor or gas-engine-driven models permit you to select the most efficient, economical compressor for every job. Write Dept. ND-1 for Bulletin K-307.

FREE New slip-stick selector to help determine the right Kellogg-American air compressors for your needs. Send for yours on company letterhead today.

KELLOGG DIVISION
ROCHESTER 9, N. Y.
AMERICAN Brake Shoe COMPANY
Kellogg-American
⅓-20 H P AIR COMPRESSORS · PAINT SPRAY EQUIPMENT

▲ For more details circle NED-483 F4 on enclosed inquiry slip ▲

FEEDRAIL®
TROLLEY BUSWAYS

PAY OFF IN SAFER CRANE AND HOIST OPERATIONS

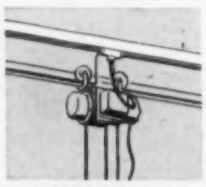
When FEEDRAIL goes into your plant—the danger to personnel and equipment from exposed wiring goes out.

With its sliding contacts and its current-carrying copper bus bars enclosed in a sturdy steel housing every inch of the way, FEEDRAIL comes as close to giving you *100% safe crane and hoist electrification* as you can get. There's no chance of frayed, sagging or broken wiring—there's no danger of accidental contact with exposed conductors—and there are no long cables trailing in aisles and work areas.

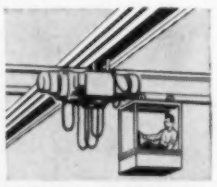
The result—fewer electrical accidents—faster, more efficient materials handling—safer and less frequent maintenance—and lower insurance rates as a result of improved safety records and the elimination of hazardous working conditions.

What's this mean to you? Simply that the savings you'll make will quickly repay the cost of your FEEDRAIL installation.

FEEDRAIL "60"
for budget hoists



FEEDRAIL "100"
for heavy duty hoists and light tonnage cranes



FEEDRAIL "HEAVY DUTY"
for big tonnage cranes and hoists

GET THE DETAILS
We'll be glad to send you descriptive literature giving full details and engineering data. Address Dept. D-6.

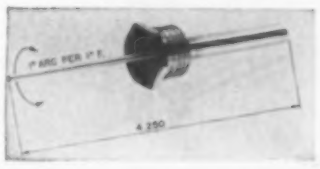
SOLD BY MORE THAN 1,000 ELECTRICAL DISTRIBUTORS FROM COAST TO COAST

CH4-2A

ELECTRIC FEEDRAIL
Never Becomes Obsolete
FEEDRAIL CORPORATION
Subsidiary of Russell & Stoll Company, Inc.
125 BARCLAY STREET NEW YORK 7, N. Y.
SPECIALLY QUALIFIED REPRESENTATIVES IN PRINCIPAL CITIES

▲ For more details circle NED-484 F4 on enclosed inquiry slip ▲

ROTARY THERMAL ACTUATOR
operates in 50 to 200° F range



Where it is desired to actuate a potentiometer or produce torque with a change in temperature, this rotary thermal actuator can be used. Model shown operates in range of 50 to 200° F, has angular movement of 1 degree for 1° F change in temperature and, at any point in range, has spring rate of 0.06 oz-in. per 10-degree angular movement. Unit is 4¼ in. long overall, while its shaft measures 3/32-in. diameter by 2 in. long. Standard ⅜-in. pipe threads are provided for installation. Device is made of nonmagnetic materials except for bimetal element. Nonmagnetic miniature ball bearing can be used where extreme sensitivity and maximum torque are required. Made by **Anthony Mfg. Co.**, Dept. N, 407-409 Main St., East Orange, N. J.

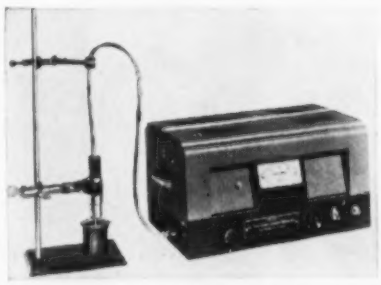
▲ For more details circle NED-485 F4 on enclosed inquiry slip ▲

SOLENOID VALVE
increases cylinder operating speed

Increases in operating speeds of small air and hydraulic cylinders are made possible by V5-3 Quick Exhaust solenoid valve, which more than doubles the standard speed of the cylinder return stroke. Valves can be provided for ⅛ or ¼-in. NPT pipe connections and are available in a complete range of alternating and direct current voltages. Pressure ratings and inlet orifices are 50 psi and ⅛-in., 75 psi and 3/32-in., 100 psi and 1/16-in., and 150 psi and 3/64-in. Valves are of stainless steel construction and have positive spring-loaded operation. Made by **Skinner Chuck Co.**, Skinner Electric Valve Div., 112 Edgewood Ave., New Britain, Conn.

▲ For more details circle NED-486 F4 on enclosed inquiry slip ▲

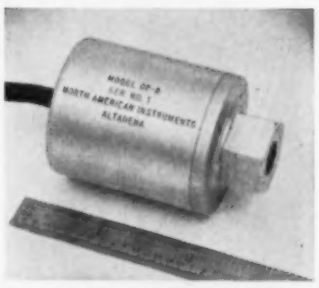
VISCOSIMETER
operates on ultrasonic principle



Instantaneous, accurate and continuous measurement of viscosity is provided by this ultrasonic viscosimeter with no moving parts. Measurements are made by immersing the sensing element of the probe in any liquid. Meter instantly and directly gives the solution viscosity in centipoises times density. Viscosities from 0 to 100,000 centipoises or higher can be measured at room or elevated temperatures and under heavy pressures. One laboratory and two industrial models are offered for connection to any standard recorder-controller for continuous monitoring of processes. Made by **Ultrasonic Engineering Co.**, Dept. N, Box 46, Maywood, Ill.

▲ For more details circle NED-487 F4 on enclosed inquiry slip ▲

PRESSURE TRANSDUCER
with ranges from 200 to 5000 psi



Suitable for both static and dynamic measurements, the model GP-8 pressure transducer has ranges extending from 200 to 5000 psi and is rated at 100 per cent safe overload. Natural frequency is from 2000 cps at lowest range to 10,000 cps at highest range. Unit resists mechanical vibration and shock excitation and acceleration response in the most sensitive axis is less than 1 per cent full scale per 1000 g in all ranges above 1000 psi. Any excitation frequency from 60-50,000 cps may be used, the maximum input voltage at 3000 cps being 30 v. Full scale output is 40 mv per volt input in bridge circuit operation. Made by **North American Instruments, Inc.**, 2420 Lake Ave. N., Altadena, Calif.

▲ For more details circle NED-488 F4 on enclosed inquiry slip ▲

REMEMBER THE NAME . . . Rubyfluid
the easy-to-use Soldering Flux for neat, strong unions.

Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux*, perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-489 F4 on enclosed inquiry slip ▲

Just drill and drive SEL-LOK SPRING PINS

Sel-Lok Spring Pins are slotted tubular pins that lock by spring action when driven into drilled holes. They eliminate the need to hold close tolerances and perform costly tapping, reaming, peening or milling operations. The chamfered ends make starting easy; the rounded edges of the slot, found only on Sel-Lok Spring Pins, eliminate scoring of holes.

Use Sel-Lok Spring Pins as rivets, hinge pins, keys; to replace tapered, grooved and cotter pins. They are available in a full range of diameters and lengths from .062 x ¼" to .500 x 4". For more information, write to STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SEL-LOK SPRING PIN DIVISION SPS
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-490 F4 on enclosed inquiry slip ▲

REED TRADEMARK
GENUINE
SELF-FEEDING RATCHET REAMER
Saves Time, Money and Effort

Users find that the Genuine REED self-feeding Ratchet Reamer saves as much as two-thirds of the time and effort required by other similar-purpose tools. Spiral flutes with patented controlled-depth cutting edges actually CUT burr with NO pushing effort. Double pawl ratchet cuts lost motion in half. Capacity to 2". Ask your supplier or write for free literature.

In a Vise or Pipe Tool, If it's a REED . . . it's RIGHT!

REED MANUFACTURING COMPANY
ERIE, PENNSYLVANIA, U.S.A.

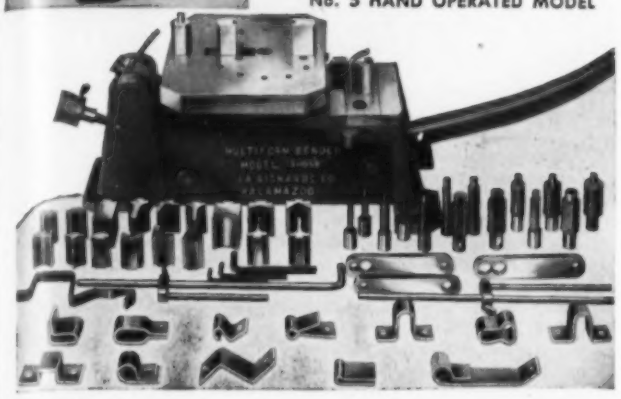
▲ For more details circle NED-491 F4 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling—Saves Die Costs Saves on Expensive Presses

This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to ⅛" x 1½".

No. 5 HAND OPERATED MODEL



AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS

IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

For more details circle NED-492 F4 on enclosed inquiry slip

Less bounce to the ounce!

Keep fragile and liquid cargoes on an even keel with new Bassick medium-duty "Floating-Hub" casters.

Famous "Floating-Hub" design actually *floats* spring-controlled wheel in frame, providing mechanical resiliency between rim and axle. Despite bumps and rough surfaces, all four wheels remain on floor, absorbing *both vertical and horizontal shocks* safely.

These new casters have 5½" and 7" dia. wheels in swivel or rigid design. Rubber or semi-steel tread. For loads from 100 to 700 lbs. Write for new booklet FH-53. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick A DIVISION OF STEWART SW WARNER

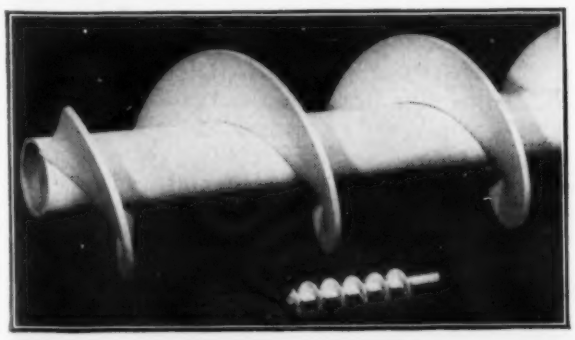
MAKING MORE KINDS OF CASTERS... MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP

For more details circle NED-493 F4 on enclosed inquiry slip

BOTTLES TO BOXCARS

The large worm shown below is used for unloading boxcars while the small worm is used for filling bottles. An illustration of the sizes and designs available.



Helicoid and Ribbon,

WORMS AND SPIRALS

JAMES EAGEN & SONS

150 8th St.

WEST WYOMING, PA.

For more details circle NED-494 F4 on enclosed inquiry slip

STUD WELDING FASTENERS for roofing and siding application

Improvements in welding studs for the construction industry provide corrosion resistant fasteners for corrugated asbestos, steel, aluminum flat asbestos and insulation. They are suited to all types of curtain wall construction, as application is from the top side of the roof or outside of the wall. Known as Korr-Studs, the fasteners become an integral part of the steel structure. They are designed to allow maximum loading, yet provide a wide safety factor. Made by **KSM Products, Inc.,** 321 Woodland Ave., Merchantville 6, N. J.

For more details circle NED-495 F4 on enclosed inquiry slip

AGITATOR SELECTOR dials to correct blade type

Dial-type selector automatically indicates the correct Pneumix agitator for any liquid batch mixing problem. Pointer is turned to size of batch to be mixed and correct agitator is read off in the window opposite the fluid consistency and the amount of mixing desired. Reverse side of dial gives details of a range of 11 models of air motored agitators, capable of mixing from 5 to 2400 gal. Available free from **Eclipse Air Brush Co.,** 421 Park Ave., Newark 7, N. J.

For more details circle NED-496 F4 on enclosed inquiry slip

PULSE TRANSFORMERS for digital computer applications

Standard and miniature hermetically-sealed pulse transformers are designed for digital computer applications in high speed circuits utilizing pulses from 0.1 to 20 microseconds duration. Miniature 10Z units are primarily for flip-flop, buffer, pulse amplifier and gating circuits with pulse duration from 0.1 to 0.5 microsecond. They are housed in corrosion resistant cans ¾-in. long and ½-in. diameter. Larger 20Z transformers are housed in drawn-metal shell "bathtub" cans measuring 1¾ x 1¼ x ½ in., chassis mounting ears being available. They are designed for blocking oscillator circuits, push-pull memory ring driving circuits and other applications requiring fast rise time with minimum lag and decay with pulses up to 20 microseconds. Made by **Sprague Electric Co.,** 183 Marshall St., North Adams, Mass.

For more details circle NED-497 F4 on enclosed inquiry slip

STUD DRIVER for use with impact wrenches

Vibration encountered when using an impact wrench for motive power can be withstood by the Bull Dog stud driver. Production type driver is equipped with a loose pressure plunger which affords easy release from the stud after it has been driven. It also tends to prevent pulling the stud back out of the castings. Driver accommodates stud diameters from ¼ to 3 in. and female driving squares from ½ to 1½ in. Morse taper and hex slip chucks can be furnished to adapt the tool to other motive power. Made by **Titan Tool Co.,** Dept. X, Main St., Fairview (Erie County), Pa.

For more details circle NED-498 F4 on enclosed inquiry slip

Quality STARTS at 100 lbs.

W. S. P.

Ohio Brass believes in building the same fine quality into its 100-pound (WSP) valves as it does into valves of higher pressures. So on lines where pressures do not exceed 100 pounds for working steam, or 150 pounds for water, oil, or gas, why not use one of the Ohio Brass 100-pound valves? Save yourself the additional price that you would pay for a higher pressure valve.

O-B makes 100-pound (WSP) globes and gates with both threaded and solder-type pipe ends.

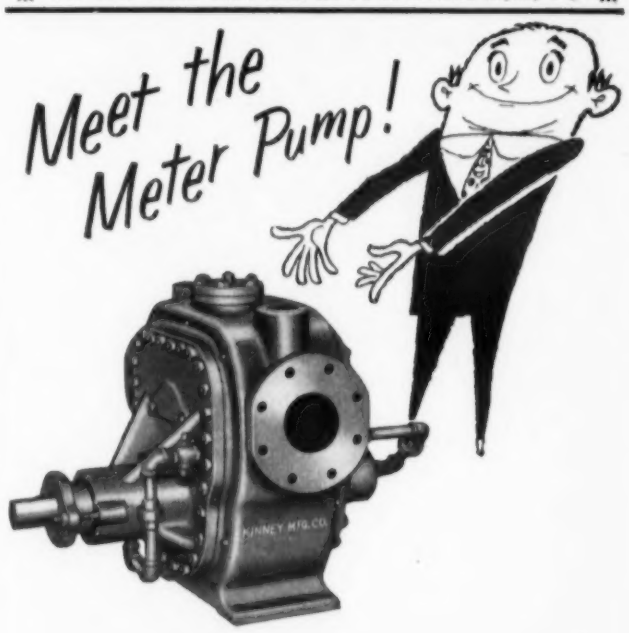
Ohio Brass makes a complete line of bronze valves for industrial use. Write today for additional information.

4457-V

O-B VALVES Ohio Brass MANSFIELD OHIO, U. S. A.

For more details circle NED-499 F4 on enclosed inquiry slip

Meet the Meter Pump!



In thousands of installations, the Kinney Model SD Rotating Plunger Pump "doubles in brass": (1) it pumps viscous fluids efficiently and economically, and (2) it serves as a combined meter and pump due to its unusually high volumetric efficiency.

This is important to the process industries, for proportioning liquid components, and where a fixed percentage of viscous liquids must be maintained. The Kinney SD Pump is also unbeatable for pumping viscous materials in storage and bulk plants. Furthermore, the Kinney SD Pump is a "miser" when it comes to maintenance. There are no valves, blades, springs, or vanes to clog up or get out of order . . . everything about this pump is designed for long, continuous, dependable operation.

SD Pumps are available in capacities from 2 GPM to 3000 GPM — steam-jacketed in most sizes.

KINNEY MFG. DIVISION

THE NEW YORK AIR BRAKE COMPANY

3612 WASHINGTON STREET • BOSTON 30 • MASS.

☐ Please send Bulletin L51 describing the complete line of Kinney Liquid Pumps.

Name.....

Company.....

Street.....

City..... State.....

For more details circle NED-500 F4 on enclosed inquiry slip

New BORG MICROPOTS

The new standard for Precision Multiturn Potentiometers . . . Eliminates the necessity for special designs.

Models Available for Test and Evaluation

SERIES 901-903 TEN-TURN POTENTIOMETERS

Model No. 902S Servo Mount at One End

Designed for utmost versatility and adaptability. New standard Borg Micropots are available in single or double shaft models with exceptionally rigid Servo-mount or bushing-mount at either or both ends.

SERIES 931-935 THREE-TURN POTENTIOMETERS

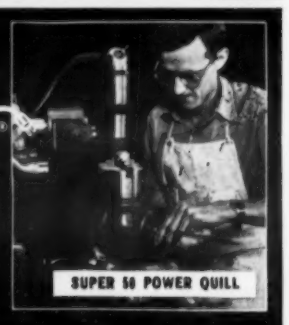
Model No. 933SS Servo Mount at Both Ends

WRITE TODAY FOR COMPLETE INFORMATION

BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

▲ For more details circle **NED-501 F4** on enclosed inquiry slip ▲

Precise LOWEST COST PRECISION FOR TOOL ROOM AND PRODUCTION



UP TO 45,000 R.P.M. AND ¼ H.P. ON AC/DC. Only PRECISE has the speed, power and precision needed to turn *Tungsten Carbide Mills* as well as all other rotary tools with shank diameters to ¼". Grind, mill, finish, polish any material from wood to the hardest alloy steel. MODELS SUPER 30 and SUPER 40 are for hand applications or machine set-ups; PRECISE SUPER 50 is for heavy duty in machine set-ups. Precision quills and chucks; lifetime-lubricated, micro-precision bearings; machined metal housings. Mounts and accessories for each model extend versatility on standard machine tools.

Write FOR CATALOG

PRECISE PRODUCTS CORP. 1346 Clark St., Racine, Wis.

▲ For more details circle **NED-502 F4** on enclosed inquiry slip ▲

"George"* the MATERIALS HANDYMAN

. . . is a almost-automatic tote box truck that pays for itself in lift and strain prevention. Small metal parts, in several boxes, are easily drawn over beveled edge of truck and held in safe position by means of mechanical leverage handle hook. Load rests on set of upper rollers while lower traction rollers make easy hauling to destination. Most plants can use a battery of "George" trucks . . . for protective, low-cost, long service life. Women operate these trucks easily, without trouble or strain. Details on request.

LET "*George*" DO IT

*TRADEMARK

Write for free Folder N

2RG54B ROLOCK Inc. • Fairfield, Conn.

▲ For more details circle **NED-503 F4** on enclosed inquiry slip ▲

ATTENDANCE TIME RECORDER is self-regulated every 24 hours

Adaptable to any payroll time or tabulating card, the Paymaster automatic attendance time recorder is self-regulated every 24 hours. It accommodates any complicated signal and work shift schedules automatically, eliminating all manual operations. Case measures 9½ x 14½ x 14½ in. and has a 7-in. time indicating dial. Mounting can be on wall, table or shelf and operation can be individually from 110 v ac or from a master clock control. Made by **Cincinnati Time Recorder Co.,** 1726 Central Ave., Cincinnati 14, O.

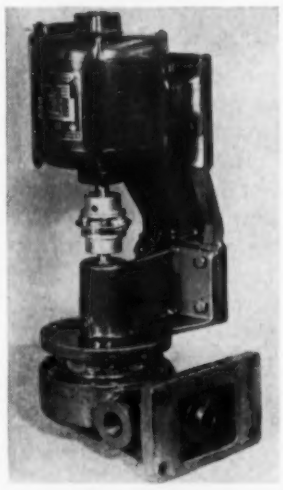
▲ For more details circle **NED-504 F4** on enclosed inquiry slip ▲

PLASTIC KNOBS AND HANDLES various colors, shapes and sizes

Stocked molded plastic knobs and handles for wide variety of applications are made in various colors, shapes and sizes. Modifications can be made from stock molds to meet special requirements. Special markings, graduations and other designs can be branded as desired. They are usable on appliances, instrument panels, testing equipment and welding machines. Made by **Synthetic Products Co.,** 1403 Sixteenth St., Racine, Wis.

▲ For more details circle **NED-505 F4** on enclosed inquiry slip ▲

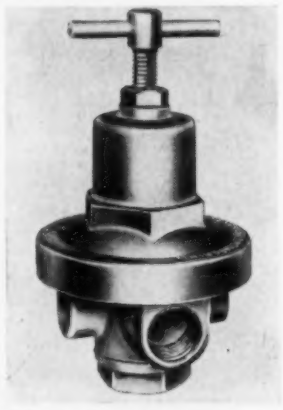
SEAL-TYPE CENTRIFUGAL PUMPS improved units have third outlet



Improved models FB-VBA and F-VBA Pioneer seal-type centrifugal pumps feature optional third outlet back through intake port, eliminating external piping. Units will handle continuously or intermittently most moderately viscous and corrosive liquids. Both are designed for flange mounting on outer surface of tank or reservoir. Model FB-VBA is supplied with motor base bracket for mounting of any standard motor, while with model F-VBA, a belt, chain or gear drive can be used, or pump and motor can be individually mounted on tank or reservoir and connected by flexible coupling. Made by **Detroit Harvester Co.,** Pioneer Pump Div., 14301 Tireman Ave., Detroit 28, Mich.

▲ For more details circle **NED-506 F4** on enclosed inquiry slip ▲

PRESSURE REGULATORS for inlet pressures up to 400 psi



Reduced pressure ranges of 5 to 50, 10 to 100 and 90 to 200 psi are available in line of pressure regulators, made in ¼, ⅜ and ½-in. pipe sizes. They handle inlet pressures up to 400 psi and are supplied with or without connections for pressure gages. Body parts are brass forgings. Valve is self-aligning and fully guided, allowing maximum air flow with minimum pressure drop. Metal diaphragm permits use with air, water or oil. Made by **Generant Engineering Co.,** 256 S. Twentieth St., Newark 3, N. J.

▲ For more details circle **NED-507 F4** on enclosed inquiry slip ▲

practical answer to the increasing importance of production line marking!

The INDUSTRIAL AUTO-PRINTER

Use the Industrial Auto-Printer to print your bags and containers as you need them — to speed up your production and simplify your marking problems.

Completely eliminating expensive hand stencilling, the Auto-Printer has more than met requirements for imprinting, coding, dating, addressing and other marking. Adaptable to almost any size or type of container, it prints at up to 2000 impressions per hour — legibly and accurately.

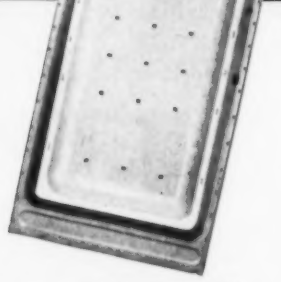
In hundreds of plants, Auto-Printers are setting appreciable records for saving marking time and labor where efficiency, accuracy and speed are demanded.

We are also prepared to design, develop, engineer and manufacture . . . to the highest standards of excellence . . . units to meet your special needs in marking and coding equipment. Full information and recommendations for your requirements will be sent on request. *Write for catalog. Dept. NED.*

Industrial Marking Equipment COMPANY, INC.
454 Baltic Street, Brooklyn 17, New York • MAin 4-2601

▲ For more details circle **NED-508 F4** on enclosed inquiry slip ▲

need volume production?



get it here—in **plastics** *molded by General American*

Manufacturers who never dreamed of using plastics for parts or products are getting results they've always wanted at General American's huge plants!

Big Volume Production—fast, at low cost, with color, fine finish and difficult designs *molded in*. These products are molded on batteries of injection presses ranging up to 300 ounces, compression presses up to 2,000 tons, and a variety of sizes of reinforced plastics presses.

New Sales Appeal, New Products, New Ideas can take shape when General American's start-to-finish facilities join your team. Experienced men with equipment unmatched anywhere will work with you on every phase of production.

Talk over your requirements and ideas with a General American engineer.

PLASTICS DIVISION GENERAL AMERICAN TRADE MARK *Plastics Division*

GENERAL AMERICAN TRANSPORTATION CORPORATION
135 South La Salle Street • Chicago 90, Illinois

▲ For more details circle **NED-509 F4** on enclosed inquiry slip ▲

4 NEW FREE Bulletins

bringing you latest data on SPECIAL TYPE

SET SCREWS

The answer to your big problem may be a little different set screw, such as the new ones illustrated and described in these bulletins:

NU-CUP Set Screws with 42% sharper angle than regular cup point, to offer greater resistance to removal.

OFF-SET Self-Locking Set Screws—Slotted Head set screw that resists loosening, even under severe vibration.

FLUTED SOCKET Set Screws—Long-approved by Federal Standards. Furnished with any type point.

IMPROVED ZIP-GRIP* Self-Locking Set Screw—Now even better for applications requiring locking action at any point.

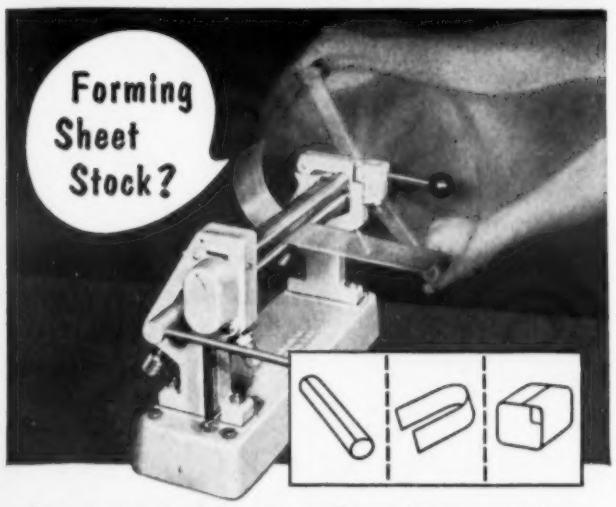
Write in margin of this page name of type screw in which you are interested, and bulletin will be sent you promptly, without charge or obligation.

Set Screw & Mfg. Co. *Pat. Pending

130 Main St., Bartlett, Ill. (Chicago Suburb)

We Specialize in Solving Puzzling Set Screw Problems

▲ For more details circle NED-510 F4 on enclosed inquiry slip ▲



Do it Quickly, Easily, Accurately with a New DI-ACRO* ROLLER

A cam actuated idler roll—an exclusive feature—makes it possible to form any diameter circle in two operations. Also, bends can be located at any point along the edge of a sheet with straight sections on both sides of the bend. Special rolls available for forming round, other shaped stock. Eight models. Rated capacity to 16 gauge. Forming widths from 6 to 42 inches.

*pronounced Die-ack-ro

di-acro PRECISION METALWORKING MACHINES

SEND FOR 32-PAGE CATALOG

O'NEIL-IRWIN MFG. COMPANY

354 8th Avenue • Lake City, Minnesota

▲ For more details circle NED-511 F4 on enclosed inquiry slip ▲

NEW Ejectopump

COMPRESSED AIR OPERATED

for ABRASIVE and INFLAMMABLE LIQUIDS and SEMISOLIDS

Requires no lubrication

NO GLANDS

NO BEARINGS

NO MOVING PARTS

Now available for the first time in the U. S. Especially suitable for handling latex, bitumen, paint, chocolate, fruits and vegetables suspended in water, pottery slip, carborundum slurries, and various chemicals. Will not cause aeration or coagulation of materials. Available in 1½", 2", 3", 4" and 6" sizes.

Write today for complete details.

FERRO

FERRO CORPORATION Supplies Division

4181 EAST 56th STREET • CLEVELAND 5, OHIO

▲ For more details circle NED-512 F4 on enclosed inquiry slip ▲

VIBRATING CONVEYOR carries materials at 38 fpm

Small vibrating conveyor is designed to convey such materials as grain, metal scrap, chemicals, coal and bundled newspapers at a speed of 38 fpm. Single-drive 1-hp model is available in lengths ranging from 20 to 100 ft and can be coupled in tandem. Standard pans are 4 in. deep and can be supplied in widths of 8, 12, or 18 in. with or without top covers. They are available in stainless steel or with special coatings to handle corrosive or abrasive materials. Unit can be set up or moved in less than 1 hour and sole maintenance required is lubrication of three standard cartridge type bearings. Made by **Hewitt-Robins Inc.,** Dept P, 666 Glenbrook Rd., Stamford, Conn.

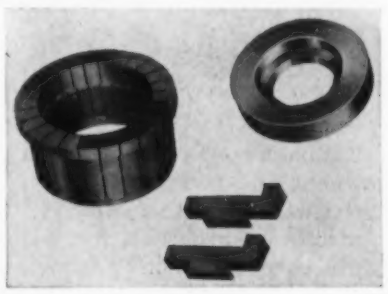
▲ For more details circle NED-513 F4 on enclosed inquiry slip ▲

EXPLOSIONPROOF TIMER controls any electrical equipment

Explosionproof case makes possible use of electric timers in hazardous locations or dangerous applications. Applications include use for control of conveyors, heating processes, liquid agitation and other machinery. Positive switch action is provided by the timer, since its setting knob is directly connected to the switch operating cam. Energy required to operate the switch is built up in the manually set pointer, relieving motor and clutch of drag. Fully-enclosed switch is rated at 1000 w and is single-pole double-throw type. Self-starting synchronous motor is completely sealed. Made by **Zenith Electric Co.,** Dept. NOC, 152 W. Walton St., Chicago 10, Ill.

▲ For more details circle NED-514 F4 on enclosed inquiry slip ▲

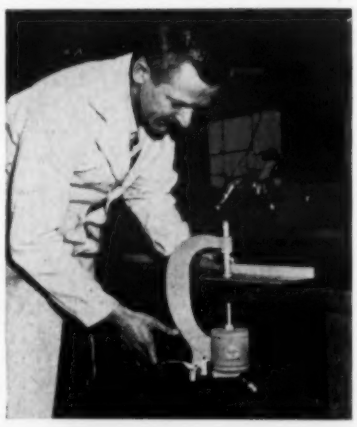
SINTERED MOTOR PARTS high density for good conductivity



Commutator segments, slip rings, pole shoes and bearings for electric motors are being produced from Gramix sintered metal. They are compacted under pressures up to 70,000 psi to give them a relatively high density for good conductivity. Parts have sufficient porosity to permit impregnating them with various fluids during manufacture for long wear. Gramix parts are available in sizes to suit many electric motor applications. Made by **United States Graphite Co.,** 1620 Holland St., Saginaw, Mich.

▲ For more details circle NED-515 F4 on enclosed inquiry slip ▲

AIR-ACTUATED C-CLAMP closes with 700-lb thrust



Self-adjusting head incorporated in the Kajon air-actuated C-clamp provides even pressure and reduces possibility of marring the work. Clamp is made in one standard size (special sizes are available) with an opening of 6 in., throat of 3 in. and plunger travel of 2 in. Clamping pressure is 700 lb on a line pressure of 100 psi. Air chamber and valve are an integral part of the clamp at the base. Clamp will swing aside, out of the way, without disturbing it or the work. Available from **Burklyn Co.,** Dept. NED, 3429 Glendale Blvd., Los Angeles, Calif.

▲ For more details circle NED-516 F4 on enclosed inquiry slip ▲

This Model #RH-68 PERECO Electric Roller-Hearth Furnace is especially designed for rapid and easy handling of large or heavy loads, such as tools, dies, or products of similar nature which are difficult to load or unload from a hot furnace. Also ideally suited for enameling on bulky or heavy metal items. Typical of all Pereco Furnaces built to specialized job-requirements. Automatic temperature controls of all standard makes are available to meet the individual need. Tell us your need and let us propose the answer.

PERECO

ROLLER-HEARTH Electric FURNACE

Specifications

Chamber Size:	15" w. x 30" d. x 15" h.	Standard and Special units
Roller Extension:	15" w. x 36" l. (working ht. 30")	
Overall Size:	42" w. x 48" d. x 75" h.	
Counterbalanced Door:	Drop-type with roller mounted top edge	
Atmosphere Vent:	For release of fumes, located in arch	
Temperature:	1400° F. normal, 1500° F. maximum	450° F. to 5000° F.
Connected Load:	20 KW, 220 volts, 60 cycle, 1 phase.	

Write today for Catalog

PERENY EQUIPMENT CO.

Dept. G, 893 Chambers Rd., Columbus 12, Ohio

▲ For more details circle NED-517 F4 on enclosed inquiry slip ▲

NOW! A COUPLER THAT

won't BLOW apart

won't PULL apart

won't FALL apart

Instant Coupling... JUST PLUG IT IN

• No Pulling • No Twisting
• No Turning • No Screwing

FOSTERMatic QUICK DETACHABLE COUPLERS

AIR · OIL · GREASE

• Passes Up To 49% More Air

• Can Be Used Directly With Air Tools Without The Use Of "Lead Hoses"

Holds tighter without leakage, yet swivels freely. "Dogs" lock—STEEL against STEEL. Positioned by floating steel carrier. All usual housing wear is eliminated. Write for NEW descriptive literature.

THE FOSTERMATIC "BULLDOG" GRIP Note Long Bands of Gripping Surface

"WE HAVE GOOD CONNECTIONS"

FOSTER MFG. CO., Inc.

Dept. 2B, 2850 GRAVOIS • ST. LOUIS 18, MO.

▲ For more details circle NED-518 F4 on enclosed inquiry slip ▲

Get TUFF-TEX for floors *that get a bang out of production!*

The thump and vibration of heavy machines . . . the constant flow of plant traffic . . . calls for heavy-duty flooring like Tuff-Tex* *Greaseproof* Industrial Tile.

Lubricating oils, grease, metal chips can't hurt Tuff-Tex.

Available in many handsome colors, Tuff-Tex offers unusual versatility of design . . . both decorative and functional.

Send for Tuff-Tex folder or call in your Tile-Tex* contractor, listed in the classified pages of your phone book.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218, Terminal Annex, Los Angeles 54, California

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*REG. U. S. PAT. OFF.

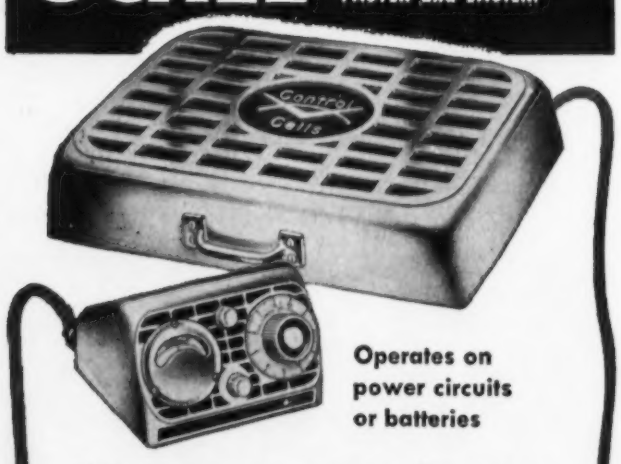
TUFF-TEX GREASEPROOF INDUSTRIAL TILE

For more details circle **NED-519 F4** on enclosed inquiry slip

Now! 20 TON WEIGHING CAPACITY IN A 35-LB. SCALE!

NEW Portable ELECTRONIC SCALE

WEIGHS LARGE LOADS ANYWHERE, FASTER and EASIER!



Operates on power circuits or batteries

Light enough to carry easily, yet strong enough to handle 20 ton loads . . . this "little giant" brings you new opportunities for time and cost savings in weighing operations. No installation needed—just place it, plug it in, and start weighing. There's nothing to get out of order—no tubes, no fragile parts. Scale is weather, temperature and shock-proof—with 10 ton overload capacity. Dial may be placed near the work or connected through cables for remote reading. Four or more portable platforms may be used with a single indicator.

The new Control Cells Electronic Scale or Weight Indicator takes electronic weighing out of the laboratory and makes it a completely new and versatile industrial tool. Send for complete literature. Engineered applications also available for built-in installations.

Control Cells

CONTROL CELLS CORPORATION
511 North Hillside
Wichita 6, Kansas

CONTROL CELLS CORPORATION
Engineering Department
511 North Hillside, Wichita 6, Kansas

Please send me complete information about your new Electronic Scale.

Name.....
Position.....
Firm.....
Address.....

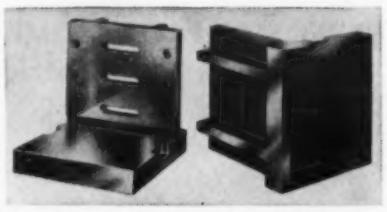
For more details circle **NED-520 F4** on enclosed inquiry slip

SMALL STAMPINGS for radio and electronic use

Including solder lugs, terminals, contacts, corona rings and others, over 1000 different parts are available as standard items in line of small stampings for radio, electronic and similar uses. Manufactured by high production techniques, parts are supplied to specification within close tolerances. Base metals include brass, copper, beryllium copper, phosphor bronze and steel. Made by **Malco Tool & Mfg. Co.,** Dept. NDC, 4025 W. Lake St., Chicago 24, Ill.

For more details circle **NED-521 F4** on enclosed inquiry slip

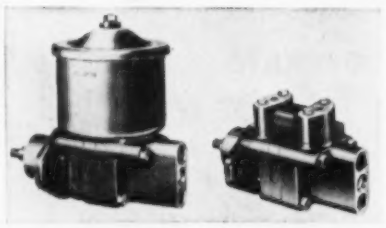
ANGLE IRONS for inspection and machining set up



Developed to simplify set up of parts for both inspection and machining, Multiplex angle irons are especially suitable for use in general tool and die work. They are made of normalized cast iron and have all surfaces scraped for accurate flatness and squareness. Standard model measures 12 x 12 x 12 in., has plain surface of 9 x 12 in. and working surface at right angles of 10 x 12 in. Holes and slots are provided for clamp bolts, and four tapered holes accommodate eye-bolts for ease of handling. Base section has recessed clamping lips. Working surfaces are square within 0.0005-in. in 6 in., and parallelism of respective sides is held to 0.0005-in. tolerance. Made by **Taft-Peirce Mfg. Co.,** 11 Mechanic Ave., Woonsocket, R. I.

For more details circle **NED-522 F4** on enclosed inquiry slip

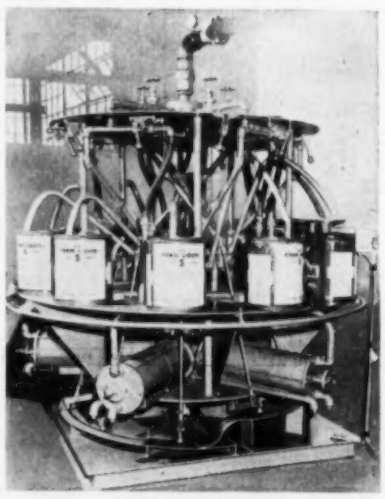
POWER STEERING PACKAGE in 1½, 2½ and 3 gpm capacities



Vickers vane type hydraulic pump, flow control and overload relief valves, plus integral oil reservoir make up series VT16 power package, one of two pump series for hydraulic steering systems. Series VT17 is comprised of identical pump and valve units without the reservoir and is designed for installations where separate tank is preferred. Series VT16 package is used with hydraulic steering booster to form complete steering system and needs only to be bolted on, coupled to engine by belts and two hydraulic connections made to booster. Overload protection is built in. Both power packages are available in 1½, 2½ and 3-gpm flow control capacities. Made by **Vickers Inc.,** 1456 Oakman Blvd., Detroit 32, Mich.

For more details circle **NED-523 F4** on enclosed inquiry slip

ROTARY CAN FILLER fills 20 5-gallon cans per minute



Adjustable to the nature of the liquid being dispensed, this rotary filler is capable of filling up to twenty 5-gallon cans per minute continuously. Two men are required, one to feed empty containers onto filling stations and one to remove and cap filled cans. Each of the ten stations is adjustable to 5-gallon volume, plus or minus 1 pint. Accuracy of each charge is within 1 cu in. An automatic cutoff will not allow filled containers to pass the discharge point. Made by **Drum Equipment Corp.,** 945 Lehigh Ave., Union, N. J.

For more details circle **NED-524 F4** on enclosed inquiry slip

step up production with

STOW flexible shaft MACHINES

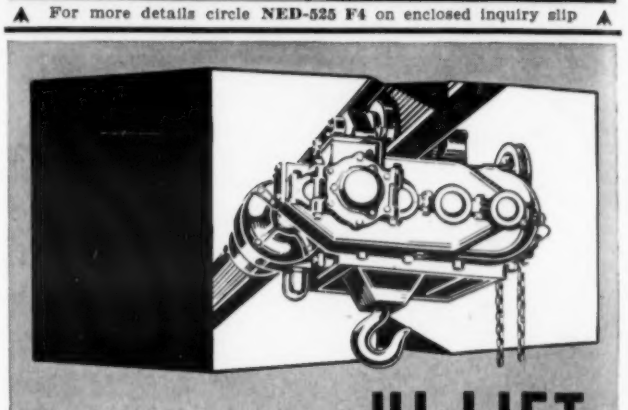
These dependable STOW FLEXIBLE SHAFT MACHINES save production time . . . speed up output . . . help lower production costs. Variable Speed Models shown are easily portable . . . cut down operator fatigue and increase on the job efficiency!

Constant Speed Models available. Also complete line of accessories designed to increase the utility of STOW Flexible Shaft Machines!

WRITE TODAY
for your free copy of CATALOG 51

STOW MANUFACTURING CO.
26 Shear St. Binghamton, N. Y.

For more details circle **NED-525 F4** on enclosed inquiry slip



NORTHERN HI-LIFT Heavy Duty Hoists

Precision built for dependable, general purpose, heavy duty service. Capacities from 2 to 15 tons in standard I-beam, monorail, lug suspension or base mounted types. Bulletin H-112.

NORTHERN ENGINEERING WORKS
210 CHENE ST., DETROIT 7, MICH.

For more details circle **NED-526 F4** on enclosed inquiry slip

"High Production" SANDER...

NATIONAL MODEL 600

CUTS FINISHING COSTS!

NATIONAL NS SANDERS

National Sanders are made for tough use on production lines. Properly used, they will cut sanding time up to 75% over hand sanding . . . reduce operator fatigue . . . and, at the same time, produce a better finish. These lightweight, vibrationless block sanders can be used on wood, metal, plastic, felt, stone, and other surfaces. Write for more information today.

NATIONAL AIR SANDER, INC., 2820 Auburn St., Rockford, Ill.

For more details circle **NED-527 F4** on enclosed inquiry slip

SAVE HOURS *in finishing time with* **LIQUAMATTE** *wet blasting*

Tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting Machine. It produces close tolerance finishes mechanically at high speeds that previously have been impossible to achieve except by hand methods. For example, at the Oling Tool Company, a Liquamatte is saving an average of 50% on former time and labor requirements for surfacing tools prior to plating. On some items, such as drill bits, savings as high as 80% have been effected. Send for Bulletin 43 for the complete story.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

For more details circle NED-528 F4 on enclosed inquiry slip

TOUGHEST WHERE WEAR IS ROUGHEST

Standard abrasion tests show Tripl-Palm will outwear by many times the usual coated glove. It's an extremely heavy Vinyl coating on the palm (main point of wear) that does the job, yet it is still a soft and pliable glove for hand comfort.

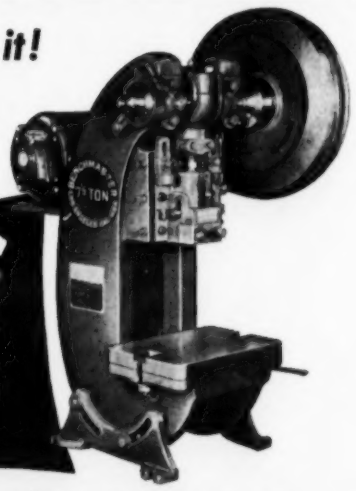
NO SEAM HERE The wing thumb construction multiplies glove life. All sizes and styles available from your Jobber or write direct.

In Canada, Safety Supply Co., Toronto

THE SURETY RUBBER CO. CARROLLTON, OHIO

For more details circle NED-529 F4 on enclosed inquiry slip

You demanded it!* benchmaster *built it!



7½ TONS IN EVERY STROKE!

This moderately-priced punch press now gives you the *extra* tonnage capacity to easily handle jobs overloading your smaller presses. Massive, heavy-duty construction throughout, plus proven features that have made Benchmasters the world's favorite low-tonnage presses!

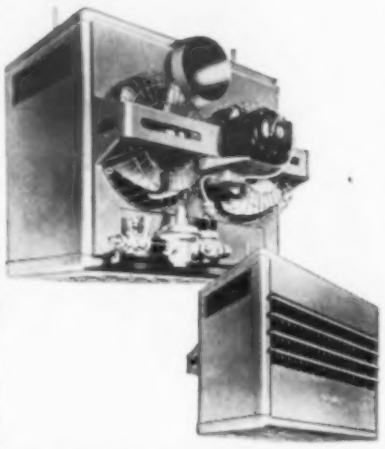
See the complete Benchmaster line today! Now available in 51 models! Literature available! Benchmaster Manufacturing Company, 1835 W. Rosecrans Ave., Gardena, California

Also available:
BACK GEARED to provide the slow, powerful strokes for blanking, forming and deep drawing operations.
HALF-PRESS where unlimited shut height is needed!

benchmaster World's largest manufacturer of small punch presses and mills.

For more details circle NED-530 F4 on enclosed inquiry slip

UNIT HEATER
250,000 Btu twin-fan model

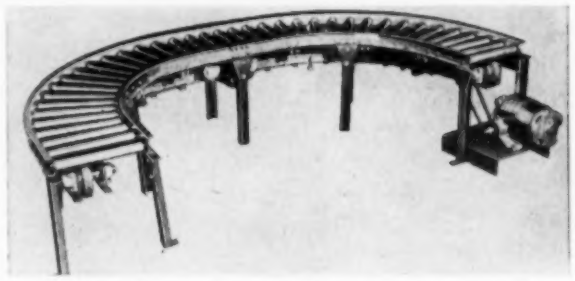


Two fans, operating from a single heavy duty ¼-hp motor, are incorporated in this 250,000-Btu gas-fired unit heater. Fans move 3200 cfm with an air throw of 83 ft. Burner arrangement is from back to front, rather than from side to side as on other burners in the line. Access panel to burners and pilot is across the back. Dimensions are 33½ in., 36 in. wide and 24⅝ in. deep. Made by **Reznor Mfg. Co.**, 168 James St., Mercer, Pa.

For more details circle NED-531 F4 on enclosed inquiry slip

180-DEGREE CONVEYOR CURVE
horizontal powered live roller type

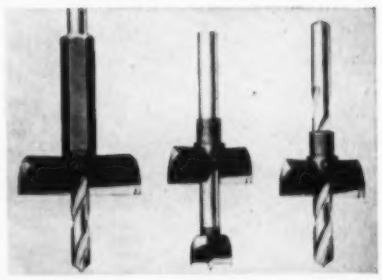
Power driven and designed for horizontal operation, this 180-degree live roller conveyor curve features power throughout its full length. Rollers are actu-



ated by contact with a bottom-mounted flexible belt. Power curve units are also available with 30, 45 and 90 degrees of total travel. All are made in nominal conveyor widths and broad range of sizes. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

For more details circle NED-532 F4 on enclosed inquiry slip

COUNTERBORES
in sizes from 1⅜ to 4½ in.



Series of field-tested counterbores has been added to Planitor bit line and embodies "chip flow" principle. Bores will fit any ½-in. drill shank and are available in sizes from 1⅜ to 4½ in., as well as special sizes to order. Choice of mountings as shown in photo include, left, short ½-in. drill for pilot hole, driven with FM Planetor shank; center, any ½-in. shank machine bit; and right, ½-in. twist drill. Made by **Price & Rutzebeck**, 22150 Meekland Ave., Hayward 79, Calif.

For more details circle NED-533 F4 on enclosed inquiry slip

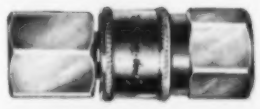
HEIGHT GAGE
riser attachment extends range

Improvements made in the Micro-Height gage include tarnish and rustproof chrome finish on outside surfaces. A 3-in. hardened and ground standard riser is now available for attaching to gage. With direct capacities from zero at base to 3 in., in thousandths, riser extends range to 6 in. Gage reads like a micrometer and is supplied with scriber for use by layout men and toolmakers. By replacing scriber with dial indicator, gage can be used to measure distance between holes or surfaces. Made by Fairfield Gauge Co., instrument is distributed by **Cleveland Instrument Co.**, 735-A Carnegie Ave., Cleveland 15, O.

For more details circle NED-534 F4 on enclosed inquiry slip

ALL COMERS!

HERE'S THE CHAMP . . . YOU SUPPLY THE CHALLENGER



The difficult fluid, gas, or air transmission problem in your plant—We'll send you a Snap-Tite Hi-Flow quick connect disconnect coupling—double or single shut-off or straight-thru—any size ⅛" to 3"—Test it! in your Plant, under actual working conditions—You be the judge—If it doesn't do a better job than the coupling you're now using — Or solve your problem—Ship it back collect! Fair enough? Write today on your letterhead, briefly outlining your problem —We'll ship immediately.

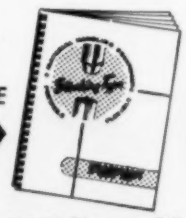
Snap-Tite INC. 201 S. WOODROW UNION CITY, PENNA.

For more details circle NED-535 F4 on enclosed inquiry slip

Well Stacked!

In commodity warehouses and manufacturing plants "EMI" strong, safe, better engineered, stacking racks can save handling time and space from receiving to shipping. Our engineers are available to study your operation and make suggestions.

WRITE FOR THIS NEW CATALOGUE →



EQUIPMENT MFG. INC.
21566 Hoover Rd., Detroit 5, Mich.

For more details circle NED-536 F4 on enclosed inquiry slip

Here's a CONVEYOR BELT that DEEP FREEZE CAN'T HURT!

Buffalo's solid woven cotton conveyor belt can withstand temperatures from 20 to 40 degrees below zero. It's the belt with the "built-in bounce" that's tougher, longer lasting and more economical. Equalizes itself in operation for accurate alignment and is light weight, clean and adaptable to any conveying job.

OVER 200 SIZES 35 WIDTHS 7 THICKNESSES

FREE 14 PAGE GUIDE TO Buying the Right Conveyor Belt for your Particular Job. Illustrated Uses, Maintenance Tips, Sizes, Prices.

BUFFALO WEAVING & BELTING COMPANY
209 CHANDLER STREET BUFFALO 7, NEW YORK
NEW YORK PHILADELPHIA CHICAGO DETROIT LOS ANGELES

▲ For more details circle NED-537 F4 on enclosed inquiry slip ▲

This single high vacuum gauge

ranges from 0.5mm to 10^{-7}mm Hg

It's the Philips Gauge, Type PHG-09, developed by CVC to accomplish, with a single sensing element, the performance usually expected from two-element combination gauges.

This precisely calibrated gauge is equipped with four scales on a single meter face. Its rugged, all-metal gauge tube can be attached to any vacuum system.

The Type PHG-09 Philips Gauge is only one of the family of gauges CVC provides to meet any need for accurate pressure measurement throughout the entire range of high vacuum.

For detailed information on this gauge or on any phase of vacuum measurement, creation, or use, write *Consolidated Vacuum Corporation*, Rochester 3, N. Y. (a subsidiary of Consolidated Engineering Corporation, Pasadena, California).

CVC

Consolidated Vacuum Corporation
Rochester 3, N. Y.
designers and manufacturers of high vacuum equipment
SALES OFFICES: Menlo Park, Calif., Chicago, Ill., Camden, N.J., New York, N.Y., Boston, Mass.

▲ For more details circle NED-538 F4 on enclosed inquiry slip ▲

Built stronger . . . to serve longer!

ALCO-LITE
TYPE 100
all-aluminum
STEP LADDER

Light, handy Type 100 ladder is one of the strongest step ladders made. Its rigid folding design and extruded alloy aluminum construction provide extra years of trouble-free service. In heights 4′ to 14′, with bucket rest, corrugated 4″ steps and non-slip rubber feet.

Write for complete specifications today . . . and compare ALCO-LITE with any other metal or wooden ladder!

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
346 CARBIS STREET • WORTHINGTON, PENNA.

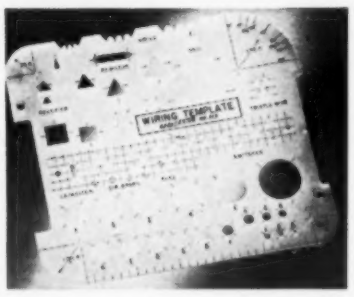
▲ For more details circle NED-539 F4 on enclosed inquiry slip ▲

DRAIN PUMPS
capacity 180 gph at 24-ft head

Designed to handle 180 gph against 24-ft head and 3700 gph at 6-ft head are models DSM and DSS drain pumps for cellar, elevator and boiler pit use. Standard model DSM is driven by a ⅓-hp motor actuated by noncorrosive displacer bobs which are adjustable on a stainless steel wire. With the exception of the stainless shaft it is made throughout from bronze. Model DSS is an entirely submersible unit with motor encased in stainless steel shell serving as an adjustable float control as well as motor housing. Both units use bottom suction and have semiopen nonclogging impellers. Made by **Aurora Pump Co.**, 96 Dearborn St., Aurora, Ill.

▲ For more details circle NED-540 F4 on enclosed inquiry slip ▲

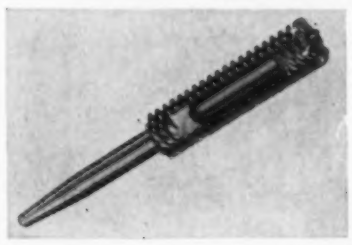
WIRING TEMPLATE
for drawing JAN-STD-15 symbols



Wiring template No. 313 permits rapid drawing of electronic symbols conforming to specification JAN-STD-15. The sizes of the symbols are in multiples of 0.2-in., standard to the minimum allowed line spacing. Template can also be used for general electronic drafting for straight edges, circles and corners. It is made from 0.030-in. matte finish plastic and has smooth milled cut-outs. Priced at $2.50, template measures 7 x 6⅛-in. Made by **Rapidesign, Inc.**, P. O. Box 592A, Glendale, Calif.

▲ For more details circle NED-541 F4 on enclosed inquiry slip ▲

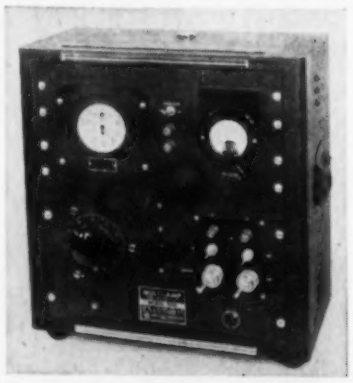
CORE TYPE HAMMER BITS
carbide tipped for high drill speed



Hammer core bits, bearing a core slot and having extension shanks for any depth hole, will operate successfully in standard hammers using turning chucks as well as in self-rotating electric hammers for which they are designed. Speed of drilling is attributed to multiple carbide inserts in perimeter of hammer body, giving rapid penetration of extremely hard materials. Made by **Tilden Tool Mfg. Co.**, Dept. NED, 209 Los Molinos, San Clemente, Calif.

▲ For more details circle NED-542 F4 on enclosed inquiry slip ▲

HIGH CURRENT TEST UNIT
has ammeter and electronic timer



Similar in design to standard units, model 1010/336/360 portable high current testing instrument has a built-in six range 0-1000-amp ammeter and an electronically actuated timer. This can be furnished to totalize 60 seconds in increments of 0.01-second, or 60 minutes in increments of 0.01-minute. Timer operates only when test current is flowing through device being tested, for accurate measurement of such factors as tripping time of overload relays, circuit breakers and fuse links while operated under simulated overload conditions. Tester has a 1 kva rating; input is 0-10 amp, 110 v ac; output is accurately adjustable from 0-500 amp at 0-2 v, 0-100 amp at 0-10v, 0-50 amp at 0-20 v, 0-25 amp at 0-40 v and 0-10 amp at 0-100 v. Made by **Multi-Amp Corp.**, Dept. MT, 10 Third St., Newark 7, N. J.

▲ For more details circle NED-543 F4 on enclosed inquiry slip ▲

Houdaille Automatic Co

AUTOMATIC • CONTINUOUS • Collects, Transports and Discharges Solid or Fibrous Materials—Metal Working Chips, Powders, Dust, Scale, etc.—Wet or Dry!

Tubular or open flights carry any materials which settle to bottom of tanks or hoppers . . . continuous or intermittent operation

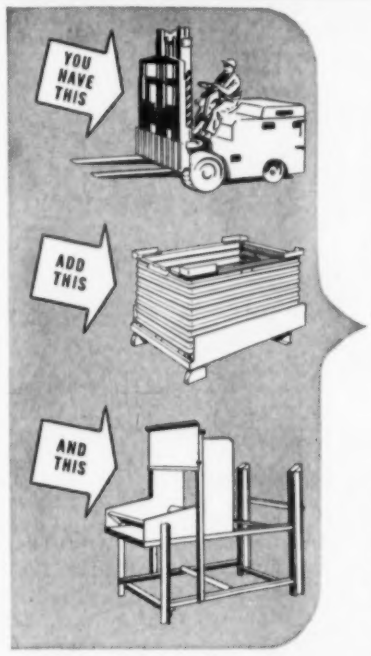
Unlimited applications . . . readily adaptable to almost any space or traverse requirement . . . standard pipe sizes —3", 4", 6", 8"

System eliminates costly manual handling methods, speeds up production, pays for itself in maintenance savings alone

Each Houdaille Conveying System "tailor-made" by Honan-Crane to solve your particular conveying problem

Houdaille Conveyor System removes chips from broaching machines in large aircraft plant. Operating automatically and continuously, each conveyor services a single machine. Chains and flights travel nine feet below floor level, use minimum floor space.

▲ For more details circle NED-[illegible] F4 on



Put these 3 together ...see what you SAVE!

RIGHT now, in plant after plant Work-O-Matic* combinations boosting production up to 52% per station . . . *without an increase in man power or space.* Here are the reasons:

First, the Work-O-Matic drop-box discharges *automatically* when

UNION METAL
Material Handling Equipment

▲ For more details circle NED-[illegible] F4 on

most PRACTICAL unit pillow block you can buy

Let your **SKF** Distributor show you the "SY" Unit Pillow Block—the *one* that offers all the easy-maintenance features you've wished for.

Rotating Seal [illegible] linger, [illegible]ectively

ACTION!

Write for Bulletin 370, with complete description, dimensional tables, available sizes, weights, etc.

The "SY" Unit Pillow Block is [illegible]changeable with existing installations by bolt hole spacing and center height features. Self-aligning bearing.

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of **SKF** *and* HESS-BRIGHT® *bearings.*

SKF INDUSTRIES, INC.
Front St. & Erie Ave., Philadelphia 32, Pa.

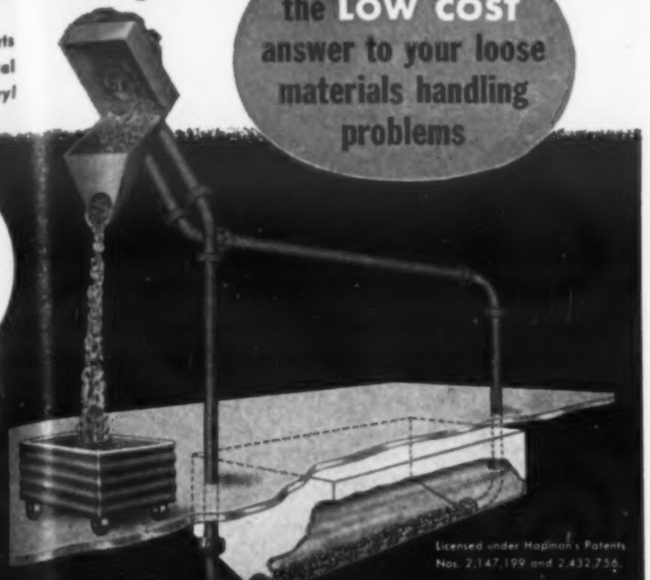
Send Bulletin 370. I'm interested in pillow blocks for _____
_____ (specify)
Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____
Type of plant _____
Approx. number pillow blocks in service _____

▲ For more details circle NED-[illegible] F4 on

ic Conveyors...

the LOW COST answer to your loose materials handling problems

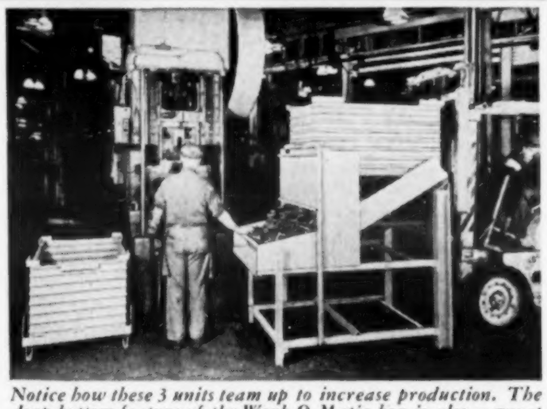
, Tran[illegible]rts
ials — [illegible]etal
-Wet [illegible] Dry!



Write
on company letterhead for 30-page catalog giving complete details on engineering features, capacities, typical applications and case histories of Houdaille Automatic Conveyors.

H[illegible]ONAN-CRANE CORP., 405 WABASH AVENUE, LEBANON, IND.
a subsidiary of
HOUDAILLE-HERSHEY CORP.

[illegible] NED-[illegible] F4 on enclosed inquiry slip ▲



Notice how these 3 units team up to increase production. The drop-bottom feature of the Work-O-Matic box is also a great time saver in many other dumping operations.

toge[illegible]her

yo[illegible]

[illegible]E!

[illegible]lant af[illegible] plant, this [illegible]* com[illegible]ination is [illegible]up to 5[illegible]% per work [illegible] *increa[illegible]n machines,* [illegible]ere are [illegible]e reasons— [illegible]-Matic [illegible]rop-bottom *[illegible]aticall[illegible]* [illegible]hen placed

in the positioning stand, providing a mass supply of material at proper work level! This cuts down the time and effort of both truck and process operators.

Secondly, the station is far more *productive,* because waste-motion stooping and stretching elements are eliminated as well as lost time waiting for material supply.

Write for Catalog 83 describing these and other Work-O-Matic units. Address The Union Metal Manufacturing Co., Canton 5, Ohio.

*Patent No. 2,445,038. Other patents pending.

L
[illegible]ment

[illegible]cle NED-[illegible] F4 on enclosed inquiry slip ▲

[illegible]it
[illegible]uy!

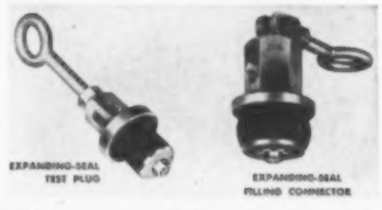
SKF®
BEARINGS AND PILLOW BLOCKS

Pa.

[illegible]ate

[illegible]ircle NE[illegible] F4 on enclosed inquiry slip ▲

PLUGS & CONNECTORS
for testing pressure vessels



Cam-lever action is used in series of Quick-Seal test plugs and filling connectors to expand and draw a flanged rubber bushing against the inside wall and face of an opening to provide an effective seal. Openings can be closed and pressure lines adapted for air or hydrostatic testing of tanks, boilers, barrels, radiators, etc., plus cast or fabricated assemblies and systems. Plugs and connectors are made for standard pipe openings from 1/4 to 4 in. and can be used in all types of plain or threaded openings. Amount of expansion and holding tension are adjustable. Made by **Mechanical Products Corp.,** N-168 N. Ogden Ave., Chicago 7, Ill.

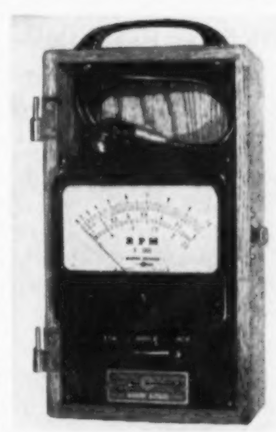
▲ For more details circle **NED-547 F4** on enclosed inquiry slip ▲

PLATFORM LADDER STEP
aluminum unit reduces foot fatigue

Foot and leg fatigue is greatly reduced by this Eze-Tred auxiliary platform step designed to fit all standard wood ladders. Step is aluminum and adjusts to ladder size without use of nuts, bolts or other fastenings. Cantilever design increases grip on ladder as load increases. Step is quickly moved from rung to rung, as required. Made by **Safway Metal Products Co.,** Dept. N, 1111 Webb Ave., Detroit, Mich.

▲ For more details circle **NED-548 F4** on enclosed inquiry slip ▲

PORTABLE ELECTRIC TACHOMETER
in four standard three-range models



Sustained accuracy for laboratory and industrial measurement of rotational speeds is built into this portable electric tachometer which features improved generator design. Expanded-scale, three-range indicator is easy to read and accurate at all speeds. Use of new filter circuit minimizes wasteful over-lapping of speed ranges, and low driving torque prevents loss of speed in checking small motors. Instrument case has detachable cover, and 36-in. long flexible rubber wire connects with lightweight generator. Four available three-range models will measure speeds from 0-600, 1200 and 2500 rpm up to 0-5000, 10,000 and 20,000 rpm. Made by **Electro-Mechano Co.,** 263 E. Erie St., Milwaukee 2, Wis.

▲ For more details circle **NED-549 F4** on enclosed inquiry slip ▲

TOOL STORAGE BOX
vertical panels pull out for access

Tools stored in the Tuldex tool box are hung on six 12 x 18 in. tempered perforated hardboard panels. This design provides unusually large storage capacity. Panels pull out for access, moving on individual tracks with geared self-lubricating nylon bearings. Front doors swing on the same type of gears and bearings, moving completely out of the way when not in use. They are fitted with built-in top and bottom locks. Heavy reinforced steel cabinet is finished in blue and gray enamel and has a drawer for power tools. Its overall measurements are 29 x 26 x 13¾-in. and it can be bench or wall mounted. Made by **Huot Mfg. Co.,** 571 N. Wheeler St., St. Paul W4, Minn.

▲ For more details circle **NED-550 F4** on enclosed inquiry slip ▲

applications unlimited!

RCA NEW COLOR TELEVISION CAMERA gives Camloc fasteners another chance to prove their versatility

Camloc quarter-turn fasteners belong wherever panels or doors are designed for speedy access. On this intricate color camera, as well as the many other applications where Camloc fasteners are employed, they mean quick engagement, firm grip and quick release.
Write for our illustrated brochure, containing descriptive information on the basic Camloc fastener line.

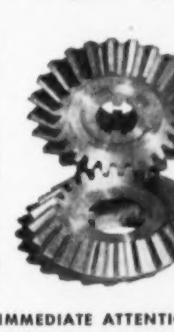
CAMLOC FASTENER CORPORATION
80 Spring Valley Road, Paramus, N. J.
WEST COAST OFFICE: 5410 WILSHIRE BLVD., LOS ANGELES, CAL.

▲ For more details circle **NED-551 F4** on enclosed inquiry slip ▲

D.O. James
Established 1888

GEARS For INDUSTRY

SINCE 1888 ... We have been making many types and sizes of gears for industry. Vast plant facilities of the most modern gear cutting equipment assure capable handling of your *production* or *special* gear requirements.



HELICAL and BEVEL GEARS—From 1" to 60" in diameter and from 24 DP to 1½ DP.
SPUR GEARS—Size range from ¾" to 150" in diameter. 32 DP to ¾ DP.
HERRINGBONE GEARS—Made from 1" to 60" in diameter and from 10 DP to 1½ DP.
SPIRAL BEVEL GEARS—Made from 1" to 30" in diam. and 24 DP to 1½ DP.
WORM GEARS — Made from 1" to 100" in diam. and from 24 DP to 1 DP.

YOUR GEAR INQUIRIES WILL RECEIVE IMMEDIATE ATTENTION
D. O. JAMES GEAR MANUFACTURING COMPANY
1140 W. MONROE ST. • CHICAGO 7, ILL.

▲ For more details circle **NED-552 F4** on enclosed inquiry slip ▲

SAND SCREEN—NEW ABRASIVE CLOTH
Use both sides...do 7 to 15 times more sanding per sheet or disc

SAND SCREEN, new open-mesh abrasive cloth by CARBORUNDUM for sanding and finishing, lets the removed material flow right through—instead of loading and glazing as conventional abrasive paper and cloth do. You use *both* sides, for each is uniformly coated with CARBORUNDUM's famous hard, sharp silicon carbide abrasive grain. Lasts from 7 to 15 times longer...gives fast, easy sanding on metal, wood, paint undercoats and sealers. Use it wet or dry...by hand or machine.

SAND SCREEN is available in full sheets, cut sheets and discs—in 180 and finer grit sizes. For hand sanding, full 9" x 11" sheets fold like paper, tear like cloth to any width you desire. Cut sheets fit your air or electric oscillating or vibrating sanders. SAND SCREEN Discs give best results when used wet with CARBORUNDUM's FASTCUT Pad Assembly. Ordinarily, no adhesive is required when sanding flats or slight contours ...the surface of the FASTCUT Pad holds the disc in place.

If you have any sanding and finishing operations where loading and glazing of your present abrasive is a problem—or where considerably less loading would help speed production, it will pay you to investigate SAND SCREEN. Your CARBORUNDUM Salesman or Distributor (listed in the yellow pages under "Abrasives" and "Grinding Wheels") will work closely with you to help you take full advantage of its many cost-cutting features. Call him—or, if you prefer, use the inquiry form provided by this publication; or write to **The Carborundum Company,** Dept. NED 82-47, Niagara Falls, New York.

"Carborundum", "Sand Screen" and "Fastcut" are trademarks of The Carborundum Company, Niagara Falls, New York

82-47

▲ For more details circle **NED-553 F4** on enclosed inquiry slip ▲

Now A REAL . . . HUSKY . . . FULL SIZE SPECIFICATION SWITCH BUILT TO DO A FULL SIZE JOB CONTINUOUSLY

P&S 20AC1

IF you need switches that can be used at full rated capacity on fluorescent and incandescent loads

IF you need switches that stand up under continuous heavy duty use

IF you want to cut down replacement costs on heavy duty circuits

YOU'LL LIKE THE WAY P&S A.C. SUPER SWITCHES HANDLE THE JOB

Both 15 and 20 Amp. types can be used on 120 V. to 277 V. fluorescent and incandescent loads at full rated capacity — can be used on motor loads up to 277 V. at 80% of switch rating.

Extra large silver alloy buttons will not oxidize under constant service, keeping temperature rise (common cause of switch failure) at a minimum.

Sturdy, totally-enclosed bodies — Easy back or side wiring — built "to take it." S.P., D.P. and 3-W, Ivory and Brown, 15 and 20 Amp. types, A.C. only.

For complete information write Dept. N

PASS & SEYMOUR INC. SYRACUSE, N. Y.
OFFICES: 71 Murray St., New York 7, N. Y.
1229 W. Washington Blvd., Chicago 7, Ill.

▲ For more details circle NED-554 F4 on enclosed inquiry slip ▲

Now! An Interrupting rating in excess of 100,000 amperes *for every set of fuse clips* . . . simply by installing FUSETRON *dual-element* FUSES

After years of development work, recent tests verified by the Electrical Testing Laboratories of New York indicate that an interrupting rating of 100,000 ampere for FUSETRON fuses is a conservative one.

On circuits set to deliver in excess of 100,000 ampere, 30 to 600 ampere, 250 and 600 volt FUSETRON fuses on every test cleared the circuit without belching flame or venting hot gases and with comparatively little noise.

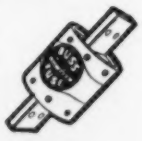
No Interference with Time-Lag

Remarkable results have been achieved. Interrupting capacity has been greatly increased while the time-lag characteristics of FUSETRON fuses has in no way been disturbed.

You get ALL THIS ADDED SAFETY without changing a panelboard or switch . . . PLUS the 10 Point Protection of FUSETRON dual-element FUSES.

For safe protection on loads above 600 and up to 5,000 ampere install BUSS Hi-Cap FUSES.

These fuses have unlimited interrupting capacity on circuits of 600 volts or less. Designed to give protection against dangerous overloads as well as excessively high fault current — yet their high speed operation on heavy shorts limits currents to safe values. When coordinated properly with FUSETRON fuses they will not open ahead of the fuse nearest to the fault.



ACTION THAT SAVES YOU MONEY

Delay may cost you far more in losses than replacing every fuse with a FUSETRON dual-element fuse on loads up to 600 amperes — and BUSS Hi-Cap Fuses on loads above that.

For blowing time charts and more information on FUSETRON dual-element Fuses and BUSS Hi-Cap Fuses write for Bulletins FIS and HCS.

BUSSMANN MFG. CO. (Div. McGraw Electric Co.)
University at Jefferson St. Louis 7, Mo.

▲ For more details circle NED-555 F4 on enclosed inquiry slip ▲

LINE MARKER
marks up to 8000 ft per hour

Pressure type hand-propelled safety line marker will apply up to 8000 ft an hour of 4-in. line. It can be adjusted for making single lines from 2½ to 5-in. wide. Unit is fitted with a 1-hp air-cooled engine and a 10-gal paint tank. In continuous duty, it uses approximately 1 gal of gasoline a day. Spray-type painting is used, with spray unit mounted at the right front of the carriage to assist in control. Model 1-10 marker is made by **M-B Corp.**, New Holstein, Wis.

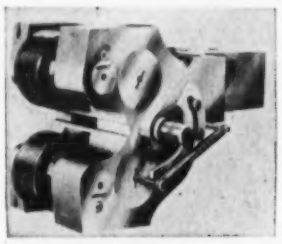
▲ For more details circle NED-556 F4 on enclosed inquiry slip ▲

FLOW CONTROL DRIVE
for gas and liquid flow regulation

Improvement in gas and liquid flow regulation can be realized through use of this small pneumatically-operated control drive which permits operation of butterfly valves, dampers and feeders on straight-line flow characteristic. Three different characteristic cams are supplied and may be shaped if necessary. Drive measures 10 x 11 x 19 in. and is installable in any position on column, pipe or flat surface. Time required for full travel of 75 degrees is adjustable. Drive has 4-in. piston stroke at torque of 75 lb-ft. Made by **Bailey Meter Co.**, 1022 Ivanhoe Rd., Cleveland 10, O.

▲ For more details circle NED-557 F4 on enclosed inquiry slip ▲

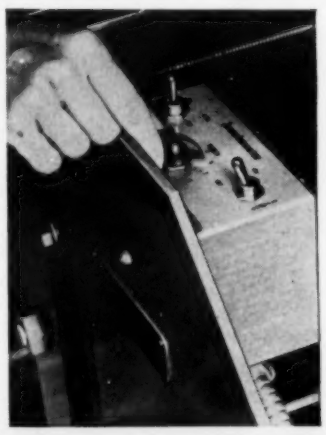
THREAD ROLLING TOOL
for automatic screw machines



Precision rolling of coarse and fine pitch threads to Class 4 limits can be performed on automatic screw machines with Lanroll thread rolling attachment. Tool provides balanced workpiece microstructure by reducing sidewise pressure between rolls and threads produced and has low gear, tooth and thrust and bearing loads. Threads can be rolled solid to shoulder without danger of roll damage. Tool is furnished in two sizes: the No. 18 for No. 5-44 pitch to ½-in.-13 pitch threads up to 13/16-in. long, and the No. 20 for ⅜-in.-24 pitch to 1-in.-8-pitch threads up to 15/16-in. long. Tipping design avoids indexing interference and allows strong construction and use of large rolls. Taper adjustment is built in. Made by **Landis Machine Co.**, 40 E. Fifth St., Waynesboro, Pa.

▲ For more details circle NED-558 F4 on enclosed inquiry slip ▲

ELECTRONIC TIMER
provides delayed shut-off or start



Delayed shut-off or delayed start are provided by Tele-Trol electronic timer. Unit is continuously variable from 0 to 10 seconds and immediately recycles when triggered. Since it is of the accumulative type, recycle time is added to balance of previous cycle if triggering occurs before shut-off is reached. Timer handles 30-amp noninductive load at 125-v ac. It is available for 110-v single phase and for 220 or 440-v three-phase operation. Overall size is approximately 3 x 4 x 5 in. Use can be with any equipment utilizing electrical motor drives. Made by **Benchmaster Mfg. Co.**, Dept. NED-6, 1835 W. Rosecrans Ave., Gardena, Calif.

▲ For more details circle NED-559 F4 on enclosed inquiry slip ▲

HAVE A SPECIALTY WIRE PROBLEM?

Whatever it is . . .
WORK WITH WEBB and get the answer!

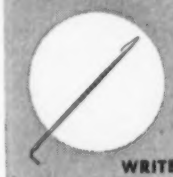
Here are three typical examples of how Webb specialists helped solve manufacturers' problems by selecting the grade, analysis and finish of wire that best met the requirements:

A KNOTTY PROBLEM

A manufacturer of wire fishing leaders had trouble with breakage when knots were tied. Webb specialists provided the answer —a wire of high tensile strength, yet ductile enough to withstand knotting.

SPRING TONIC

Tiny jewelry springs require proper tensile strength and constant uniformity. Webb stainless Spring Wire, Type 304, met all the requirements for this manufacturer.



BEARDED TWINS

Spring beard needles demand proper breaking strength, correct "springiness" and ability to harden uniformly. Webb high carbon Needle Wire filled the bill for this company.

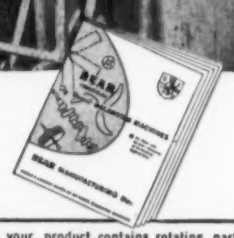
WRITE TODAY—for our new booklet, "A Look at Wire Making the Webb Way." No obligation.

THE CARPENTER STEEL COMPANY • WEBB WIRE DIVISION 17 Liberty St., New Brunswick, N. J.

▲ For more details circle NED-560 F4 on enclosed inquiry slip ▲

In 50 SECONDS per unit . . . 500 per day
DY-NAMIC BALANCING
ENDS VIBRATION PROBLEMS!
—acutal experience reported by washing machine manufacturer using model 375-BHD-R "Bear" machine.

Whether your problem is to cut down vibration, eliminate noise, reduce bearing wear or prevent mechanical failure, "Bear" Dy-Namic Balancing of rotating parts will improve performance of your product. Leading manufacturers, maintenance shops and others are using the "Bear" method with top-production results. No complicated manipulations to learn... average shop man can learn to balance within a few hours.



If your product contains rotating parts send for the **FREE DY-NAMIC BALANCING MANUAL.** Tells how you can quickly, easily, economically balance rotors, armatures, crankshafts and any other part that turns, weighing from 4 oz. to 8 tons! Your copy sent without obligation. Bear Mfg. Co., Dept N5, Rock Island, Ill.

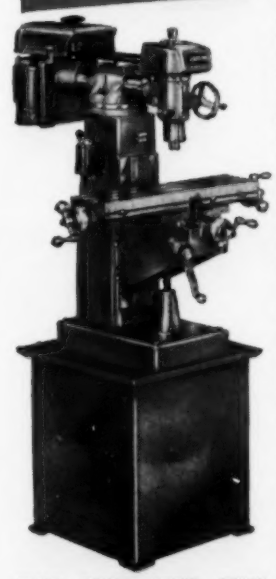
415

"BEAR"
STATIC AND DY-NAMIC BALANCING MACHINES
balance rotating parts weighing from 4 oz. to 8 tons

▲ For more details circle NED-561 F4 on enclosed inquiry slip ▲

versatility + accuracy + economy +

another great new PLUS...
The CLAUSING
VERTICAL MILLER



MILLS, DRILLS, BORES, REAMS AND SHAPES . . . AT ALL ANGLES WITH ONE WORK SETUP!

The new Clausing Vertical Milling Machine has more Plus Value features than have ever before been available in a miller at or near its price!

It has Versatility Plus! It is actually several machines combined in one. The spindle head can be swiveled in a vertical plane and set at any angle, and turret rotated in a horizontal plane making it possible to mill, drill, ream and shape at all angles, with one setup.

It has Accuracy Plus! The heart of the Clausing Mill is its rigid, high precision spindle head. It has 7 ball bearings — spindle is chrome nickel steel, hardened and ground — quill, hardened and ground, has honed bearing seats — overarm is rigid steel casting with ¾" thick walls precision ground. All feed screws have ground threads, turn on ball bearings. Table surfaces and dovetail ways on table, saddle, knee and column are precision ground.

It has Economy Plus! The Clausing reduces setup and operating costs. It's low in initial investment, low in upkeep costs. Write today for the complete story!

CONDENSED SPECIFICATIONS

Size of Table	6" x 24"
Longitudinal Table Travel	15"
Transverse Table Travel	5"
Vertical Travel of Knee	12"
Maximum Distance Spindle to Table	12"
Maximum Distance Spindle to Column	8¼"
Quill Travel	3"

Spindle Speeds: Six, 180 to 3250 R.P.M. No. 7 Brown and Sharpe or No. 2 Morse Taper Spindle Optional. Operates from ½ or ¾ HP, 1725 R.P.M. Motor.

CLAUSING DIVISION Atlas Press Company
6-113 N. PITCHER ST., KALAMAZOO, MICHIGAN
LATHES • DRILL PRESSES • SHAPERS • MILLING MACHINES

▲ For more details circle NED-562 F4 on enclosed inquiry slip ▲

FREE

HOW MOTOCYLINDERS SPEED AND SIMPLIFY MATERIAL HANDLING

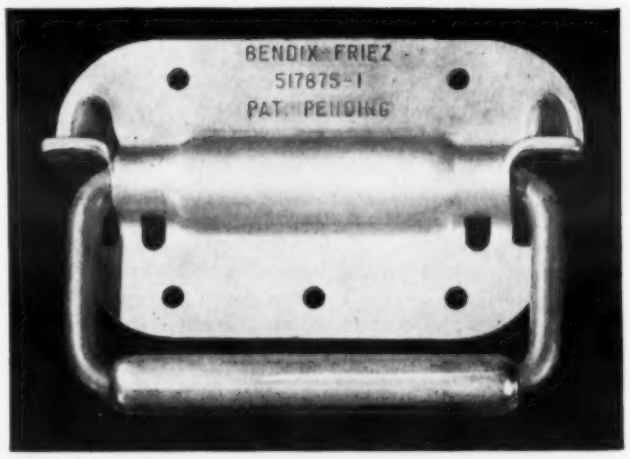
Turn to this book for a better way to push, flip, raise, lower and release material. Fully explained are the revolutionary thrust techniques of Westinghouse Motocylinders. See how these compact drive units give you greater precision and economy together with far less maintenance than your present material-handling method. The simplicity of Motocylinder installation and operation is clearly shown . . . no steam or hydraulic systems involved.

Included are thrust diagrams, torque curves, control arrangements, rating charts and important construction features of the Westinghouse Motocylinder.

Write today for your copy of B-6090 and learn how motions can be put to more practical use with Motocylinders. Address your request to: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-07339

YOU CAN BE SURE...IF IT'S Westinghouse

For more details circle NED-563 F4 on enclosed inquiry slip



A RUST-PROOF HANDLE!

We call it to the attention of manufacturers of portable equipment . . . carrying cases, parts, boxes or anything that has to be lifted or carried.

It can be riveted or welded to any kind of container. It can be depressed in the surface if you want.

Ruggedly built of aluminum and stainless steel, it is rust proof and rattle proof. It withstands shocks and vibrations. It has a patented "snap-back" feature.

If you've got something that's to be lifted by handles . . . chances are this Bendix-Friez handle is better for you.

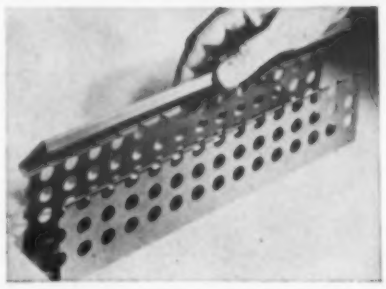
It meets military requirements for many specialized equipment uses. Manufacturers who have used them . . . call them, the best handle by far. No order too large or too small. Prompt attention. Write today.

BENDIX FRIEZ

FRIEZ INSTRUMENT
Division of
Bendix Aviation Corporation
1444 Taylor Ave., Balto. 4, Md.
EXPORT SALES
Bendix International Division
304 E.42nd St., New York 17, N.Y. U.S.A.

For more details circle NED-564 F4 on enclosed inquiry slip

WIRING DUCT
built-in clips hold wires firmly



Wiring duct is designed for use in machine tool electrification and other applications and has built-in clips which hold wires firmly. Duct is made from a thermoplastic material having physical and chemical properties similar to those of machine tool wire insulation. It will not support combustion and can be used without warping in damp conditions. Duct cover snaps on and off. Lengths up to 45 in. are available, and the ducting can easily be cut to size with a knife. Made by **Taylor Electric, Inc.**, 15450 Dale, Detroit 23, Mich.

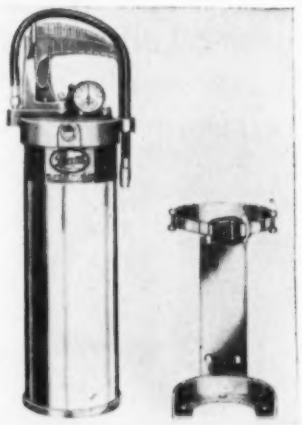
For more details circle NED-565 F4 on enclosed inquiry slip

FRACTIONAL HORSEPOWER MOTORS
ratings from 1/2000 to 1/750-hp

Two or four-pole synchronous and induction types are offered in series 1001 through 1008 Borg-Motors. Ratings of these motors are 1/2000, 1/1500, 1/1000 or 1/750-hp with power dissipated within safe temperature rise. They are totally enclosed and can be supplied with or without internal gear trains. Standard models are designed for operation on 115 v ac, but special voltages and frequencies can be obtained. Made by **George W. Borg Corp.**, Borg Equipment Div., 120 S. Main St., Janesville, Wis.

For more details circle NED-566 F4 on enclosed inquiry slip

FIRE EXTINGUISHER
2-qt vaporizing liquid type



Combination carrying handle and center-balanced squeeze-type operating valve is feature of this 2-qt capacity stored air pressure vaporizing liquid fire extinguisher. One hand holds the unit and starts and stops the discharge, leaving the other hand free to direct the 30-ft hose stream that is effective on Class C electrical and Class B flammable liquid fires. It can be recharged by refilling with Pyrene liquid and pressurizing from any factory or garage air hose. Extinguisher is equipped with a liquid level glass port and air pressure gage. UL-approved unit is made by **Pyrene Mfg. Co.**, 551 Belmont Ave., Newark 8, N. J.

For more details circle NED-567 F4 on enclosed inquiry slip

INSULATED TERMINAL
vinyl insulation withstands 6000 v

Users of heavy duty wire from size 8 to 4/0 can effectively use this Ampli-Bond insulated terminal. Insulation extends minimum distance beyond terminal barrel, provides permanent support and allows use of large size wire in restricted areas. Separate metallic ring grips wire insulation, prevents exposure of conductor during sharp bends. Vinyl insulation will withstand minimum of 6000 v. Terminal tongues are designed with helical formation for strength. Color coding is used for identification. Terminals are made in variety of tongue shapes, stud sizes and in both butt and parallel connectors by **Aircraft-Marine Products, Inc.**, 2100 Paxton St., Harrisburg, Pa.

For more details circle NED-568 F4 on enclosed inquiry slip

"This machine doubled our output!"
Folding Chair Manufacturer

Bostitch Foot-operated Stapler

A high arm stapler that adapts readily to a wide variety of stapling jobs. Shown here fastening plastic upholstery to chair seat. Also used for carding, assembling wooden toys, fastening wooden drawers, sealing packages of parts. Staples can be formed into a number of shapes. Low model available for seated operator. Easily motorized. Write for complete information on foot and motor operated stapling machines. Bostitch, 686 Mechanic Street, Westerly, R. I.

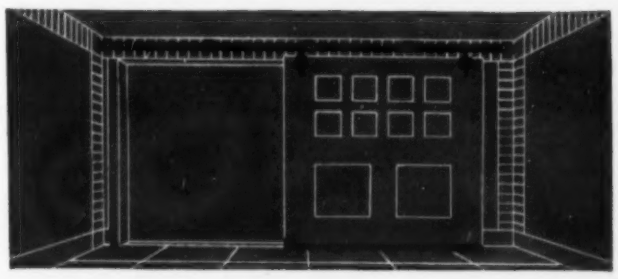
FASTEN IT BETTER AND FASTER WITH BOSTITCH STAPLERS AND STAPLES

For more details circle NED-569 F4 on enclosed inquiry slip

COBURN

SLIDING DOOR HARDWARE

smooth, easy operation . . . trouble-free life for both new and remodeling jobs



For additional information, write to Sales & Engineering, 56 Sterling Street, Clinton, Mass. or consult your classified telephone directory.

THE COLORADO FUEL AND IRON CORPORATION—Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo
Chicago • Detroit • New Orleans • New York • Philadelphia

2007

COBURN PRODUCTS
PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-570 F4 on enclosed inquiry slip

KODASCOPE PAGEANT SOUND PROJECTORS are available in six different models to meet every 16mm. projection need.

Put movies to work
with this trouble-free projector

Movies make almost every type of training or technical information easy to understand . . . easy to use . . . and easy to remember.

You know your movie shows will be successful when you use a Kodascope Pageant 16mm. Sound Projector. Faulty lubrication, the most common cause of projector breakdowns, is eliminated by the Pageant's permanent pre-lubrication. Only the Pageant has this important feature.

Simple, guided threading makes the Pageant unusually easy to operate. Completely portable, projector and speaker fit into a single, handy, lightweight case.

WRITE FOR FREE BOOKLET—"The Kodascope Pageant Sound Projector."
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

For more details circle NED-571 F4 on enclosed inquiry slip

If the equipment you are designing calls for *accurate* adjustable voltage, take advantage of the "precision-accuracy" of a POWERSTAT variable transformer. Plus — its excellent regulation ... high efficiency ... cool operation ... and long life.

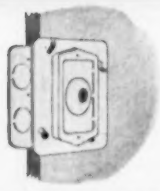
And the cost? You can buy a POWERSTAT for as little as $8.50!

POWERSTATS are designed to fit your designs. They make life easy for designers. Dimension-wise and mounting-wise, a POWERSTAT is easiest to install ... and maintenance is negligible. Write for Bulletins P550, P354 and P252.

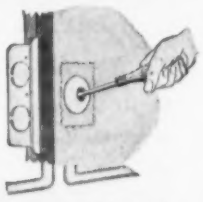
THE SUPERIOR ELECTRIC COMPANY
1806 Clarke Ave., Bristol, Conn.

For more details circle NED-572 F4 on enclosed inquiry slip

U. S. Pat. No. 2,574,382



Cover with Locator KO installed. Opening protected and location marked.



Bend Locator KO back and forth until ties are broken. Then remove KO. Box is free of debris.

This new Raco Locator KO feature is an integral part of the device ring. It makes outlet boxes easy to find when hidden by plaster. Keeps boxes clean and prevents plaster cracking about box. Wiring and device installation can be done at once. You avoid all plaster problems with the Raco Locator cover.

Write for Complete Information.

ALL-STEEL EQUIPMENT INC., Aurora, Ill.

For more details circle NED-573 F4 on enclosed inquiry slip

LEARN ABOUT THE MANY WAYS—

LESTO *Electric* **HAND SAW**

CAN MAKE MONEY FOR YOU

If your plant is large or small you'll benefit many ways with this versatile, practical "speed-up" tool for wood, metal, plastic, cement, etc. It turns out more work in less time! It turns out cleaner work with less effort! You stand to gain by spending a few minutes reading about LESTO.

Sold and Serviced in Principal Cities Throughout U.S.A.

VICTOR J. KRIEG, Inc.
Dept. C, 611 Broadway
New York 12, N. Y.
GRamercy 7-5757

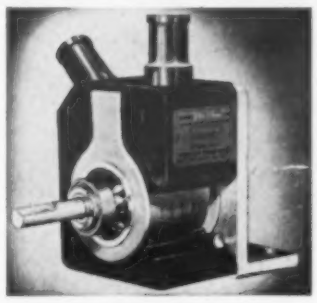
VICTOR J. KRIEG, INC
Dept. C, 611 Broadway
New York 12, N. Y.

Gentlemen:
Please send full details on LESTO Electric Hand Saw.

Name _____
Company _____
Address _____
City _____ Zone ____ State _____

For more details circle NED-574 F4 on enclosed inquiry slip

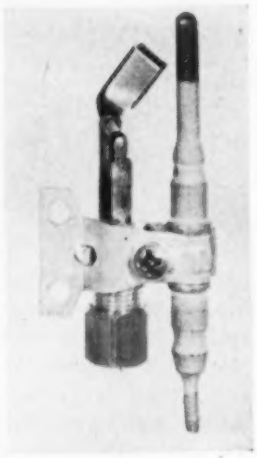
CORROSION-RESISTANT PUMPS
block is made from polyvinyl chloride



Capacities ranging from ⅓ to 20 gpm with pressures up to 60 psi and vacuums to 26 in. of mercury are obtained by V series of Flex-i-liner pumps suitable for service under corrosive conditions. Unplasticized polyvinyl chloride block is unaffected by most acids, alkalies, salts, oxidizing agents, oils, greases and alcohols. It is also odorless, tasteless and generally physiologically inert. Pumps are self-priming, and fluid contact is restricted to inner surface of block and outer surface of liner. Liner is also available made of polyvinyl chloride. Made by **Vanton Pump & Equipment Corp.**, Dept. NED, Empire State Bldg., New York 1, N. Y.

For more details circle NED-575 F4 on enclosed inquiry slip

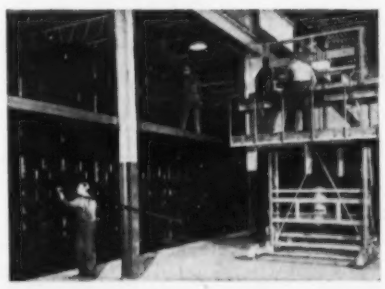
PILOT LIGHT
for gas-fired appliances



Pilot light for gas-fired appliances maintains the steady blue flame needed for proper thermocouple safety control operation at the correct heat to avoid "false" safety shut-offs. Gas and air proportioning in this No. 2B Target Pilot takes place at end of gas jet in specially designed shield which will not clog or lint. The pilot is fabricated from stainless steel to resist corrosion and offers dependable maintenance-free operation. Made by **Robertshaw - Fulton Controls Co.**, Robertshaw Thermostat Div., Youngwood, Pa.

For more details circle NED-576 F4 on enclosed inquiry slip

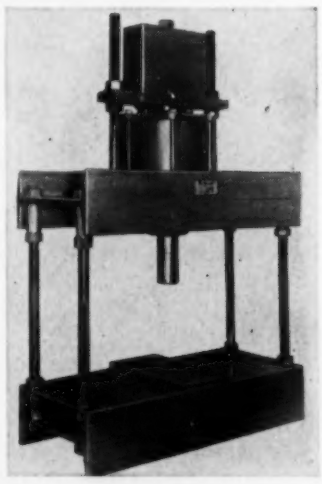
BIN-LOADING ELEVATOR
is mobile, electric-powered unit



This portable electric-powered bin-loading elevator for use in steel warehouses and lumber sheds where long, heavy material is handled is 2-ton capacity model built on 3 x 10-ft frame and 15 ft high. Elevator platform has working height runways on both sides to handle tubes, rods or other stock with minimum of manual lifting. Pushbutton controls at floor level and on elevator platform operate electric-motor-powered cable lifting mechanism. Floor anchors hold elevator and prevent it from rolling or vibrating out of fixed position. Made by **West Bend Equipment Corp.**, 329 Water St., West Bend, Wis.

For more details circle NED-577 F4 on enclosed inquiry slip

AIR-OPERATED PRESS
for bending, riveting, other uses



Air cylinder power unit with 50:1 ratio, 1½ and 6-in. strokes and adjustable air stroke limit control are features of the Vi-Speed Power House bench type air press. It can be used for assembling, bending, straightening, punching, stamping, trimming, riveting, broaching, crimping and swaging. Pressure can be adjusted from feather-touch to 2½ tons, and control is by foot or hand. Press will receive work from all four directions and work surface frame contains an adequate size hole for shaft extensions. Made by **Van Products Co.**, 3782 W. Twelfth St., Erie 2, Pa.

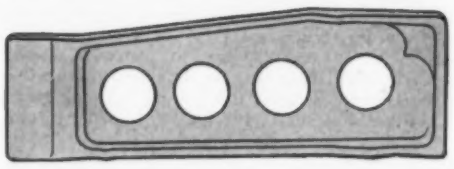
For more details circle NED-578 F4 on enclosed inquiry slip

MUELLER BRASS CO.

ALUMINUM FORGINGS

- STRONG AS STEEL BUT 1/3 THE WEIGHT.
- GOOD DIMENSIONAL STABILITY . . . MECHANICAL PROPERTIES RETAINED AT HIGH SPEEDS AND REASONABLE TEMPERATURES.
- REQUIRE LESS MACHINING AND FINISHING.
- FORGED TO YOUR SPECIFICATIONS.

MUELLER BRASS CO. • PORT HURON 27, MICHIGAN



102

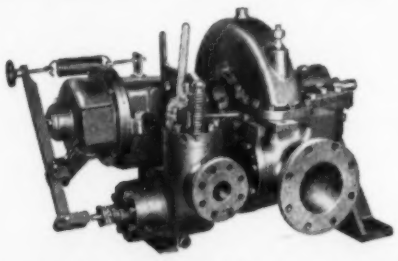
For more details circle NED-579 F4 on enclosed inquiry slip

DE LAVAL

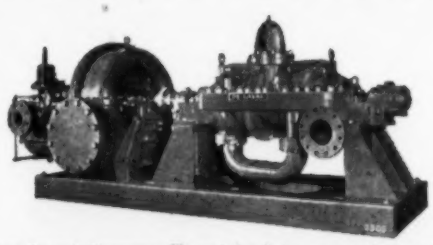
can help cut power costs

You can make important operating economies in your power house with dependable, efficient De Laval equipment. That's because De Laval turbine generators, mechanical drive turbines, boiler feed pumps and centrifugal pumps are designed for long, low-cost service. If you plan to modernize or expand your present facilities, consult a De Laval field representative or ask for the De Laval catalogs or bulletins listed below.

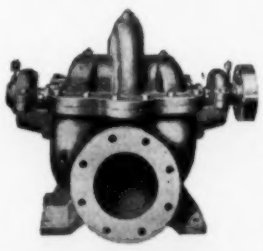
Turbine Generators Up to 11,500 kw. Available in automatic extraction designs. *Send for De Laval Catalog 4200A.*



Mechanical Drive Turbines For induced and forced draft fan drives, condensate and circulating and boiler feed pump drives. New De Laval HCB turbine available from stock. *Send for Bulletin 4206.*



Boiler Feed Pumps Furnished in a variety of designs and sizes to meet any boiler feed service. *Send for De Laval Bulletin 1502.*



Single Stage, Double Suction Centrifugal Pumps for condenser circulating and general services are available in capacities from 50 to 75,000 gpm. *Send for De Laval Bulletin 1002.*

DL-232

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

For more details circle NED-580 F4 on enclosed inquiry slip

TOW-LINE CONVEYOR

SIMPLIFIES
COORDINATES
REGULATES
EXPEDITES

It's so easy for a rush of work to throw a shop, an order department, shipping facilities or warehouse into confusion. Then production suffers, deliveries are late and costs zoom.

One dependable remedy is the time-tested MHS Tow-Line Conveyor that keeps operations moving along at a steady, orderly pace—keeps human mistakes at a minimum.

The tow-chain can be entirely below floor level—no obstructions on the floor whatever. Or the chain can be overhead if that's desirable. In either case, dolly trucks can be hooked on or released anywhere, at any time.

No limitations on the length of the system or on the number of turns.

Same system may be all on one floor or it may serve two floors—entirely flexible.

Send for Bulletin TC-1 and look over the specific details as applied to your operation.

MECHANICAL HANDLING SYSTEMS INC. AND SUBSIDIARIES
4615 NANCY AVE., DETROIT 12, MICH.
Offices in Principal Cities
FACTORIES: Detroit, Mich. • Fairfield, Iowa • Albany, N.Y. • Windsor, Ont.

For more details circle NED-581 F4 on enclosed inquiry slip

"HOW MEYERCORD SERVES INDUSTRY"
No. 1 of a Series

MEYERCORD *Nameplate* DECALS Help You DESIGN Your Product

Here's a way to shave production costs starting in the blueprint stage . . . a complete and continuous service to you and everyone in your organization concerned with product development and merchandising.

Meyercord Nameplate Decals identify your product and instruct consumers in its use. We produce Meyercord Nameplate Decals for *any* commercial surface . . . for *any* temperature condition . . . for *any* production run, short or long. And we take over the design problem.

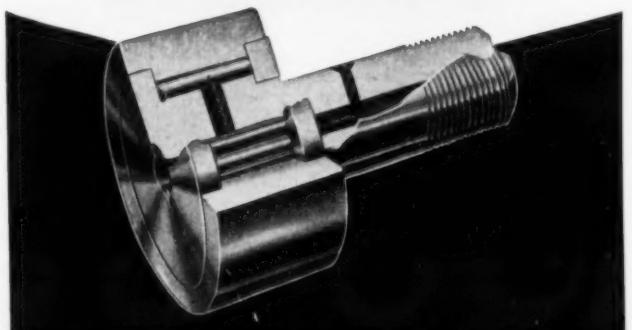
Your Meyercord representative will show how our decals surpass in ease and speed of application . . . with low unit cost. He'll show you how to cut time, labor, and material costs . . . and he'll place our laboratory at your service . . . without obligation.

FREE! "Mark-It" Manual of Decal Nameplates
Send today, on your company letterhead, for this valuable full-color guide to every industrial problem in marking, identification, instruction, and information.

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers
DEPT. U-316
5323 WEST LAKE ST.
CHICAGO 44, ILLINOIS

For more details circle NED-582 F4 on enclosed inquiry slip

Improve Performance
of cam action with MULTIROL®
Cam Follower Bearings



Multirol CF Series Bearings are designed especially to insure greater precision performance in any cam actioned bearing application. They are built to provide the ultimate in radial capacity, shock resistance, space economy and longer bearing life.

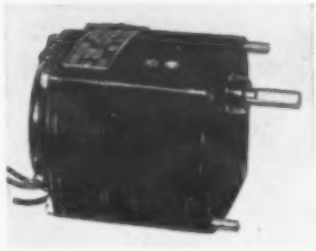
Send for McGill Catalog No. 52

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

For more details circle NED-583 F4 on enclosed inquiry slip

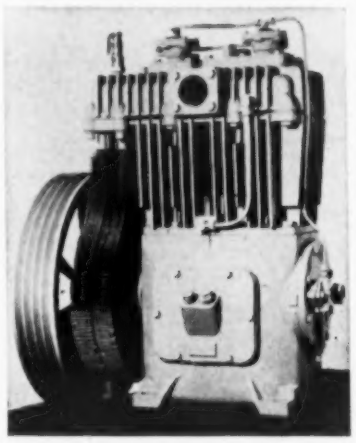
INSTRUMENT MOTOR
heavy duty speed reducer type



Instruments requiring a continuous duty motor are typical applications of the model K-2RM motor. Helical gearing provides high load carrying capacity, low noise level, smooth tooth action and uniform pitch line velocity. Speeds range from 280 to 0.7 rpm with torque ratings from 2.7 to 120 oz-in. Starting torque is not less than 150 per cent of full load torque at room temperatures. Both synchronous and nonsynchronous winding are available. Motor has three leads and is reversible. Made by **Bodine Electric Co.**, Dept. A, 2254 W. Ohio St., Chicago 12, Ill.

For more details circle NED-584 F4 on enclosed inquiry slip

AIR COMPRESSORS
with gasoline or electric drive



Designed for general purpose use, models 255 and 350 air compressors are single and two-stage models respectively and are available with gasoline or electric drive or both. Basic unit is also available with tank and base mountings. Single stage duplex cylinder unit has a maximum piston displacement of 58 cfm and continuous pressure rating of 100 psi. Two-stage model displaces 51 cfm maximum and is rated at 200 psi continuous or 350 psi intermittent duty. Both models have pressure main bearing lubrication and can be fitted with a loadless starting device. They feature a safety device which automatically unloads the compressors should the lubricating oil level become low. Made by **Quincy Compressor Co.**, 307 Main St., Quincy, Ill.

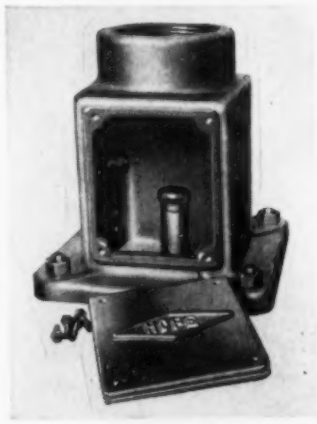
For more details circle NED-585 F4 on enclosed inquiry slip

CLAMPING ATTACHMENT
for truck handling of wooden cases

Palletless handling of wooden cases and similar loads is possible with this clamping device for industrial trucks. It consists of a standard hydraulic clamp to which has been added a pair of heavy forks. It can be used to handle palletized loads in the conventional manner. Clamp arms or forks have pointed studs on their inner surfaces which grip the load. Front stud on each fork is positioned to permit inverting or dumping a container. Studs do not damage container or contents. Clamp opening ranges from 18 to 66 in. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-586 F4 on enclosed inquiry slip

METAL-PIPE BASES
aid assembly of lighting uprights



Complete uprights for lighting and other purposes can be quickly assembled with aid of these metal-pipe bases which combine rigid, threaded support for pipe with junction chamber for splicing and grounding. For uprights of average height, bases are supplied to accommodate 2 and 2½-in. pipe. Where taller standards are required, bases are available for 3 and 4-in. pipe. Made by **Hope Electrical Products Co.**, 338-A Wilson Ave., Newark 5, N. J.

For more details circle NED-587 F4 on enclosed inquiry slip

ARMSTRONG *Carbide* TOOL HOLDERS

FOR HIGHER SPEEDS, AND HEAVIER FEEDS

ARMSTRONG Carbide Tool Holders and ARMIDE (Carbide Tipped Cutters) come in cased sets for tool rooms and maintenance departments, and individually in all sizes for general machine shop and production turning. They permit not only the ready machining of sand-filled castings, the hardest and toughest steels as well as many heretofore "unmachinable" materials, but also make practical much heavier cuts and cutting speeds up to 600 f.p.m. on ordinary work. They also run from 10 to 100 times as long between regrindings.

WRITE FOR CATALOG
ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE, CHICAGO 30, U.S.A.
NEW YORK • SAN FRANCISCO

For more details circle NED-588 F4 on enclosed inquiry slip

Designed for Speed • Precision • Compactness

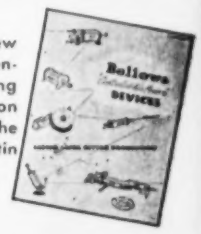
The AIR CYLINDER
with the *Built-in Valve*

Air engineers agree: the closer the valve to the cylinder, the more efficient is air cylinder operation. In the Bellows Air Motor the valve, and all operating controls, are an integral part of the cylinder itself.

This built-in construction means quicker action, more positive response, surer control, and more economical operation. Built-in construction means compactness, simplified installation, minimum maintenance.

The Bellows Air Motor is made in five bore sizes: 1¼", 1¾", 2½", 3⅝" and 4½", and in any stroke length. You have your choice of a wide range of built-in valve assemblies: low or high voltage electrically controlled operation; standard or explosion proof; momentary air exhaust or maintained air pressure pilot valve operation; or mechanical operation for manual or direct-linked control. Whatever your pneumatic valving requirements there is a Bellows Air Motor with **built-in** valve to meet your needs. Wide range of mounting styles.

New Bulletin Write for this free new 36-page booklet. Dimensional specifications, technical data, wiring diagrams, case history studies, production and cost data. Address: Dept. NED-654, The Bellows Co., Akron 9, Ohio. Ask for Bulletin CL-50.



The Bellows Co.
AKRON 9, OHIO

"Controlled Air Power"

700A

FOR FASTER, SAFER, BETTER PRODUCTION

For more details circle NED-589 F4 on enclosed inquiry slip

DIRT

never gets by an

ANDERSON STRAINER

Use them to protect
- pumps
- air tools
- reducing valves
- temperature regulators
- steam traps

FREE Valuable tips on protecting pipeline equipment with strainers. Write for a copy of Bulletin 252 today.

The V. D. ANDERSON Company
1958 West 96th Street • Cleveland 2, Ohio

SUPER-SILVERTOP STEAM TRAPS • HI-EF PURIFIERS • ANDERSON STRAINERS • SILVERTOP AIR RELEASE VALVES

▲ For more details circle NED-590 F4 on enclosed inquiry slip ▲

call for

KEM LUSTRAL®

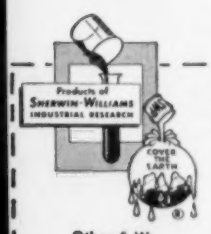
the ONE custom-quality industrial enamel you can

spray, dip or brush
air dry or bake
use inside or out—for product finishing or maintenance!

Why buy and stock several enamels for jobs that one alone can do?

KEM LUSTRAL combines, in a single material, finishing properties usually obtainable only in several. It can be brushed, sprayed or dipped. It can be air dried or baked. And it is equally outstanding both as a product finish for wood or metal products, or for industrial maintenance!

KEM LUSTRAL is locally stocked in Sherwin-Williams Branches in principal cities throughout the country. Call your nearby Branch or write for color card and details!



SHERWIN-WILLIAMS
INDUSTRIAL FINISHES

The Sherwin-Williams Co.
General Industrial Division, Cleveland 1, Ohio

Please send details on KEM LUSTRAL—also on other items checked.

Other S-W Industrial Finishes
- ☐ Furniture Finishes
- ☐ Dimenso® (Hammered Finish)
- ☐ Industrial Lacquer
- ☐ Fast Bake Enamel

NAME _____
COMPANY _____
ADDRESS _____

▲ For more details circle NED-591 F4 on enclosed inquiry slip ▲

MAGNESIUM DOCKBOARD
has adjustable position lock

Full length adjustable position lock allows Milwaukee Versatile magnesium dockboards to be used for both truck and rail docks. Integral formed side rail has lock bar which permits adjustments every three inches for virtually full length of board. Two chained pins hold locking bar in secure position at all times. Dockboards are available in lengths from 30 to 60 in. and tracking widths from 36 to 60., with capacity and design to fit requirements. Made by **Magnesium Products of Milwaukee,** Dept. MP331, 748 W. Virginia St., Milwaukee 4, Wis.

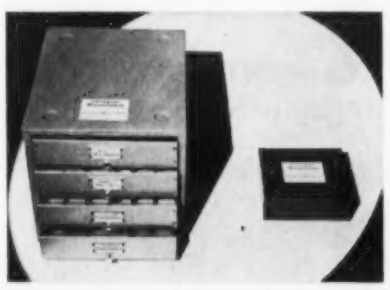
▲ For more details circle NED-592 F4 on enclosed inquiry slip ▲

ELECTRIC TOOL TESTER
quickly detects electrical defects

Automatic determination of safe working condition of such electric tools as drills, screwdrivers, nut runners, saws, grinders and soldering irons can be carried out by line of Pow-R-Safe Tool Testers. Supplementing original model A are new models B, C, E and F. Also capable of testing extension cords, the complete test takes only 7 seconds. After pressing one button, green light flashes if the tool or cord is defect-free or red light shows and buzzer sounds if the tool is defective. Six separate tests are performed. Units are available for testing tools of various voltages, current frequencies and phases. Made by **Fendall Co.,** 4633 N. Western Ave., Chicago 25, Ill.

▲ For more details circle NED-593 F4 on enclosed inquiry slip ▲

THERMISTOR KITS
for experimental and study purposes



Two kits are designed to enable scientists and engineers to explore applications of Thermistors in temperature detection and other electrical and electronic applications. Kit No. 1 (right), includes 18 Thermistors, two of each in three styles and three sizes. Kit No. 2 (left) consists of a metal container containing 104 Thermistors in 26 sizes and four styles. It also contains an assortment of steel, lead and fiber washers as well as tubing to facilitate building assemblies. Made by **General Electric Co.,** Carboloy Dept., 11163 E. Eight Mile Rd., Detroit 32, Mich.

▲ For more details circle NED-594 F4 on enclosed inquiry slip ▲

THERMOSTAT
conduction type for appliances

Heat sensitive element within the brass channel section of the case itself is design feature of model R-6 conduction type thermostat. Intended for use in appliances where fast heating and close control are required, it also features one hole or side mounting, uniform tracking of calibration curve and range of 70 to 650° F. It is rated at 115-230 v ac only with wattages up to 2000 w. Made by **American General Thermostat Corp.,** 2066 Bronx St., New York 60, N. Y.

▲ For more details circle NED-595 F4 on enclosed inquiry slip ▲

PRESSTITE SEALING TAPES

Seal IN *the quality of your product*
Seal OUT *water, air, dust, rust*

Over 400 Presstite Sealing Compounds are used in thousands of sealing applications. Perhaps one of these proven sealers is just what you need in the design, assembly or construction of your product.

Consider, for example, Presstite's #579.6 sealing tape which has excellent pressure sensitive adhesion to most materials, is non-corrosive to metals and will not swell rubber parts. The tacky fibrous mastic is non-staining, non-bleeding and remains permanently soft, neither flowing at 300°F. nor becoming brittle at –65°F. The material is furnished in extruded beads or ribbons of various sizes and is applied by hand.

Write for a sample of #579.6 . . . or tell us your sealing needs and we'll be glad to recommend the very best sealant to do the job. Wherever a protective seal against water, air, dust or rust is needed, Presstite has or can formulate the best answer.

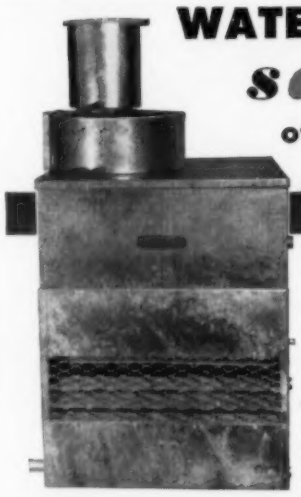
SEALANTS • ADHESIVES • COATINGS
for Automotive, Appliance, Air Conditioning, Refrigeration, Construction, and many other industries.

In Canada: Railway & Power Engineering Corp., Ltd.

PRESSTITE ENGINEERING COMPANY
3742 Chouteau Ave. • St. Louis 10, Mo.

▲ For more details circle NED-596 F4 on enclosed inquiry slip ▲

WATER PROBLEM?
save 95%
of your cooling water



with Acme towers

Whether your water supply problem is for one molding machine or for the air conditioning of the entire plant Acme has a cooling tower tailored to fit your needs. All Acme Towers are engineered and designed for the basic purpose of reducing by more than 95% the amount of water used without a tower.

Acme JCT models are small, compact and highly efficient. They are galvanized for indoor or outdoor operation. Capacities range from 3 to 12 tons.

For the bigger jobs you'll need Acme ACT models with capacities ranging from 8 to 60 tons.

Write for bulletin giving data on Acme's complete line of Cooling Towers.

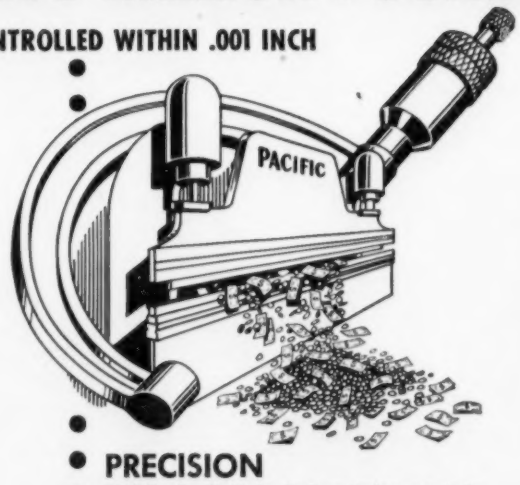
ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Refrigeration and Air Conditioning Industry since 1919

▲ For more details circle NED-597 F4 on enclosed inquiry slip ▲

TWO MILLION POUNDS

CONTROLLED WITHIN .001 INCH



PRECISION
1000 Ton Pacific Hydraulic Press Brakes repeatedly form bends within .001". The ram remains level within minutes of arc.

PRODUCTION
Pacific Hydraulic Press Brakes in operation today multiple punch heavy steel fence posts at the rate of 1000 per hour.

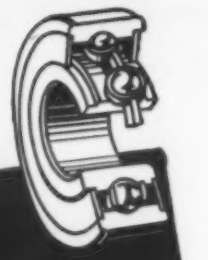
PROFITS
Precision + Production = Profits. Investigate today.

PACIFIC INDUSTRIAL MFG. CO.
848 - 49th Avenue - Oakland, Calif.

▲ For more details circle NED-598 F4 on enclosed inquiry slip ▲

How cost-wise buyers rate

STANDARD STOCK
BALL BEARINGS



GOOD
BETTER
✓ BOSTON Gear

BALL BEARINGS
Radial • Thrust • Combination
Single Row • Double Row
—for Speeds up to 5000 RPM

IN STOCK AT 92 BOSTON *Gear* DISTRIBUTORS at Factory Prices

Look under "Gears" in the Yellow Classified Section of your Telephone Directory for the Distributor nearest you.

Get this Catalog . . . lists 5112 standardized machine parts . . . your reliable "textbook" of drive design and maintenance. Ask your BOSTON Gear Distributor, or write . . . Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle **NED-599 F4** on enclosed inquiry slip ▲

$37.50* buys this

INDICATING
SNAP GAGE

Choice of 3 capacities:
0" to 1" ¾" to 2"
1¾" to 3¼"

*Price includes Indicator graduated .0005" with plain bearings and Hardened Steel anvils.

Price with Indicator graduated .0005" with jewel bearings and Tungsten Carbide anvils $57.50.

You can't afford to be without the most popular modern Indicating Snap Gage. Experience proves you aren't saving money using old style gages just because you've got them. With Visual Indicating Gages you get more accurate work with less scrap. They relieve operator uncertainty and frustration. And, they cover a wider gaging range. Larger sizes available, too. Write: Federal Products Corp., 4176 Eddy St., Providence 1, R. I.

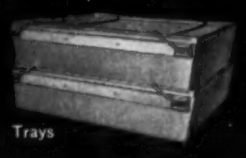
Set of 3 Gages covers all sizes from 0" to 3¼"—replaces rackfuls of old style gages.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively

▲ For more details circle **NED-600 F4** on enclosed inquiry slip ▲

WANT A SMOOTHER MATERIALS-FLOW SET-UP?

Tote Boxes



Trays

Trucks

Displayed here are a few typical examples of the strong, neat, lightweight materials handling equipment manufactured by Fibre Specialty Division.

We design, engineer and build standard or special equipment, or complete materials handling systems, to fit most production schemes across all industry.

Write for new catalog No. 54—free on request—to Dept. N-6.

FIBRE SPECIALTY DIVISION
NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

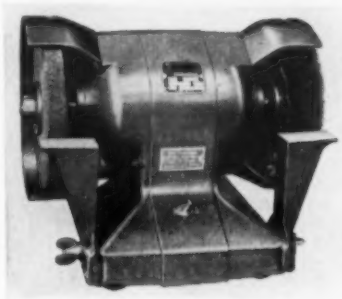
▲ For more details circle **NED-601 F4** on enclosed inquiry slip ▲

ROLLING SCAFFOLD
small welded steel unit

Only 23½ in. wide and 4 ft high and long, the Midget welded steel scaffold can be moved about on its rubber-tired casters. Rungs spaced 6 in. apart permit its two 2 x 6-in. planks and one 2 x 10-in. plank to be positioned at any height from 6 in. to 4 ft from the ground. All three planks are furnished. At higher levels, narrower planks are used as steps. Made by **Superior Scaffold Co.**, Dept. NE, 5624 Bankfield Ave., Culver City, Calif.

▲ For more details circle **NED-602 F4** on enclosed inquiry slip ▲

BENCH GRINDER
6-in. unit for intermittent shop use



Added to line of bench grinders is this 6-in. standard ball bearing model intended for intermittent shop use in grinding, tool sharpening, wire brushing and buffing. Features are spindle mounted on permanent, lubricant-sealed ball bearings and two adjustable tool rests. Wheel size is 6-in. diameter, with ⅝-in. face and ½-in. hole. Grinder is offered for operation on 60, 50 or 25 cycles, with ratings of 3600, 3000 or 1500 rpm, at either 115 or 220 V. Standard equipment includes three-conductor cable, toggle switch in base, rubber feet, wheel guards, medium grinding wheel and wire wheel brush. Made by **Black & Decker Mfg. Co.**, 762 E. Pennsylvania Ave., Towson 4, Md.

▲ For more details circle **NED-603 F4** on enclosed inquiry slip ▲

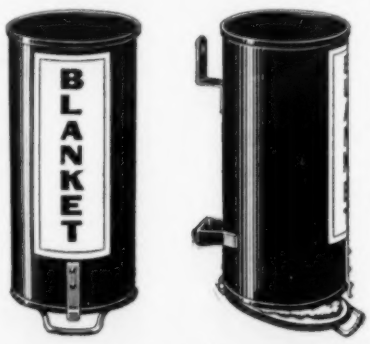
CABLE REEL
handles heavy flexible cable, wire

Heavy flexible cable, wire and other materials are efficiently handled with No. 480 welded steel cable reel which features oilless bearings and 26-in. ID coil capacity. All-steel tubular coil supports are securely locked in position by single handle. Open construction allows tying of coil before simple removal by collapsing of reel. Reel can be vertically mounted, or as shown with No. 500 stand for portable or fixed lag-bolt installation. Made by **Hykon Mfg. Co.**, Box 923-M, Alliance, O.

▲ For more details circle **NED-604 F4** on enclosed inquiry slip ▲

EMERGENCY BLANKET CANISTER
features quick-release bottom

In the event of injury, burning clothing or any other fast call for first aid, the 62 x 82-in. emergency blanket held in this quick-release wall canister is instantly accessible. Heavy gage metal canister body measures 8½-in. diameter by 20 in. high. Bottom lid is opened by means of handle set on an angle and swings clear to allow blanket to drop out. Canister is finished in red enamel. Dark gray blanket is 80 per cent wool. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

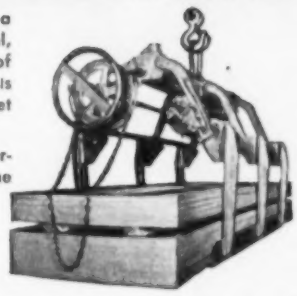


▲ For more details circle **NED-605 F4** on enclosed inquiry slip ▲

Wide *or* Narrow...

1 C-F LIFTER HANDLES THEM ALL

Whether your production requires a few or many widths of sheet steel, 1 C-F Lifter, with its wide range of jaw and carrying angle adjustments will probably meet all your sheet handling requirements.



Adjustments are made by the operator in a few seconds, permitting the Lifter to shift from wide to narrow sizes almost instantly.

Because it can pick up, carry and unload more loads per hour, using less man and crane time than any other methods, a C-F Lifter will soon pay for itself.

Bulletin SL-28 gives you the complete story of C-F Lifter advantages to you. Ask for it today. There is no obligation.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

▲ For more details circle **NED-606 F4** on enclosed inquiry slip ▲

ideas...worth

hundreds of dollars

for the price of a 3¢ stamp

Here is a collection of interesting case histories of production and maintenance problems which were solved with almost unbelievable ease and speed by the unusual use of a hose clamp to fasten things together and "Hold 'em tight" in place. Send for Clampways Ideas" while you're thinking about it.*

"The Sign of a Good Hose Clamp"

PUNCH-LOK *Company*

...or get your copy from your near-by Punch-Lok Distributor.

Punch-Lok Company
Dept. A, 321 North Justine Street
Chicago 7, Illinois

do it now

send me Clampways ideas FREE

Firm Name_____
My Name_____ Title_____
Address_____
City_____ State_____

4962

▲ For more details circle **NED-607 F4** on enclosed inquiry slip ▲

MILLIONS OF GALLONS OF LIQUIDS ARE ACCURATELY MEASURED EACH YEAR BY THESE . . .

. . . BOWSER XACTO METERS

Wherever precision measurement is essential to assure constant uniformity of product—control costs, or simplify handling of liquids—there you will usually find Xacto meters on the job.

Right now—in many plants of all types—Bowser Xactos are efficiently handling 662 different liquids.

It will pay you to consult with your nearby Bowser representative.

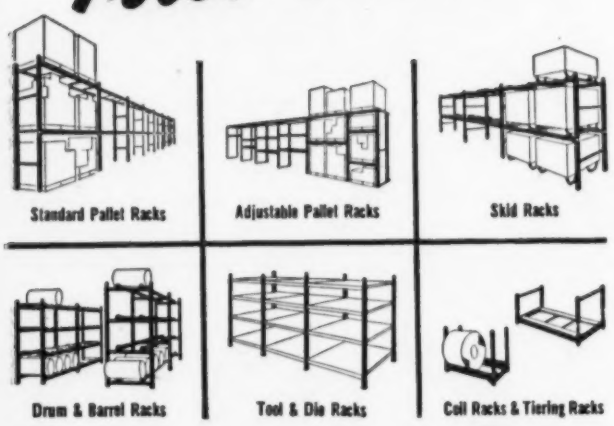
BOWSER, INC.
BOWSER 1381 Creighton Ave., Fort Wayne 2, Ind.
Regional Offices • Atlanta • Chicago
Cleveland • Dallas • Kansas City • New York
San Francisco • Washington, D. C. • Hamilton, Ontario

▲ For more details circle NED-608 F4 on enclosed inquiry slip ▲

SIMPLICITY AND INGENUITY have made

American STORAGE RACKS

First Choice



here's an exclusive American feature

American Tubular Storage Racks are designed to meet practically every storage need. They are used in every type of business, large and small. Get the facts on American Racks before you decide on any type rack. Send for catalogue.

AMONG AMERICAN USERS ARE:

Atomic Energy Commission
Aluminum Co. of America
General Electric Co.
General Motors Corp.
I. B. M.
Parke-Davis Co.
S. S. Kresge Co.
Western Electric Co.

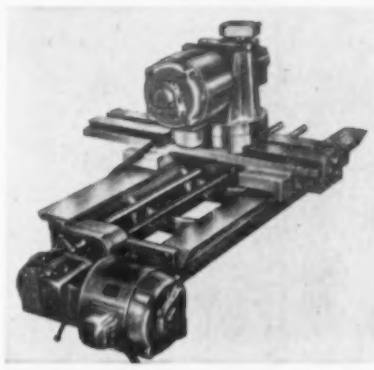
Send for Catalogue

AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

▲ For more details circle NED-609 F4 on enclosed inquiry slip ▲

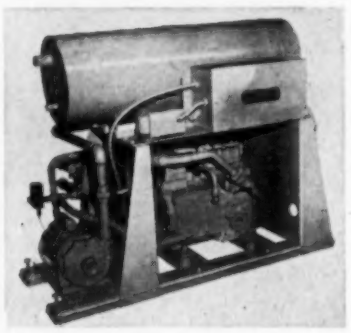
PORTABLE MILLING MACHINE
self-contained for taking to the job



Large, bulky machines can be refinished or machined without removal from their foundations by this 900-lb portable milling machine which can be taken to the job. It can be placed on press beds, hammer bases (without removing columns), punch press die beds and steel rolling mill columns. Face, front, die seat and other surfaces on upsetters can be refinished and surfaces at 90-degree angles from each other can be machined. Made by **Atlas Portable Equipment Corp.**, 1351 Porter St., Detroit 26, Mich.

▲ For more details circle NED-610 F4 on enclosed inquiry slip ▲

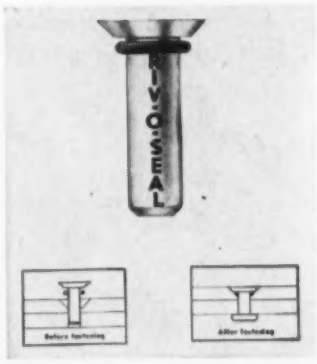
LIQUID CHILLER
for air conditioning service



Redesigned Flow-Cold packaged liquid chiller is compact unit for refrigeration and air conditioning service. It requires only simple electrical and plumbing connections to place it in operation, and is easier to install and maintain and is more efficient than previous model. Units can cool water, handle coolant cooling for metal working, do mold cooling and chill liquid brines in addition to air conditioning. They are available in six models ranging in capacity from 2 through 15 tons. Made by **Acme Industries, Inc.**, 450 Mechanic St., Jackson, Mich.

▲ For more details circle NED-611 F4 on enclosed inquiry slip ▲

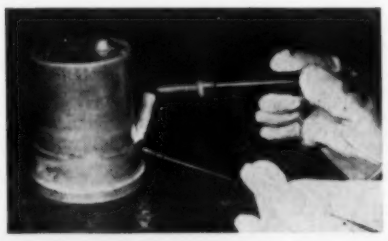
SEALING FASTENERS
flush rivets and screws have O-rings



Seal against gases and liquids at high or low pressures in flush riveted or screwed fastenings is provided by incorporation of rubber O-ring. Called Riv-O-Seal, method uses rubber O-ring where relative mass to void is precision controlled, and rubber is not deformed beyond its elastic limits. Design provides full metal-to-metal contact of facing surfaces and eliminates loss of sealing from cold flow. This type of pressure fastening is lightweight and is adaptable to such assemblies as integral tanks, cabin fuselage sealing, electronic devices and instruments. Fasteners are one-piece assemblies ready for use. Made by **Franklin C. Wolfe Co.**, 3646 Eastham Dr., Culver City, Calif.

▲ For more details circle NED-612 F4 on enclosed inquiry slip ▲

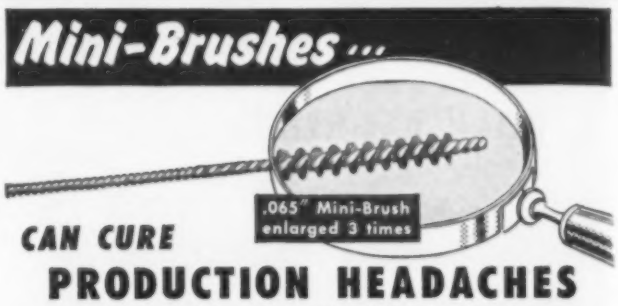
WELDING TORCH
water-cooled Heliweld model



Thin gages of aluminum, stainless steel, copper base alloys, magnesium and killed steel can be welded with the Airco H12A Heliweld holder. The lightweight water-cooled unit has durable plastic insulation and has interchangeable electrode caps of 2, 3 and 7-in. length. Other features are an assortment of ceramic nozzles which prevent arc shorting in tight spots, 12-ft long water-cooled cable assembly, collets for 0.020, 0.040, 1/16 and 3/32-in. tungsten electrodes and gas-tight sealing rings. Holder is rated at 125 amp and can be operated on alternating or direct current. It is 7½ in. long and weighs 4 oz. Made by **Air Reduction Sales Co.**, Dept. NED, 60 E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-613 F4 on enclosed inquiry slip ▲

Mini-Brushes . . .



CAN CURE
PRODUCTION HEADACHES

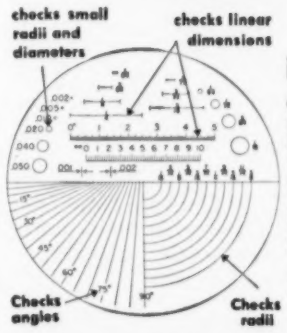
● You are looking at a twisted-in-wire brush most brush manufacturers will tell you can't be made. It is only .065" in diameter and extremely accurate to size. A maker of hydraulic equipment uses it to deburr and clean out 1/16" holes—and to minimize his production headaches.

Mini-Brushes, in decimal sizes under 1/8", and made only by Mill-Rose on special order, are cutting costs today in many plants—removing drilling, reaming and milling burs, cleaning out drilled and tapped holes ready for assembly, removing finishes, sludge, oils and chips from small threaded holes and removing flash rubber and other materials from metal bonded parts.

Mill-Rose twisted-in-wire brushes with steel, bronze, stainless, bristle or nylon fill are made in sizes down to .065" diameter—accurate to size—and sturdy. If you think these brushes can simplify a production operation in your plant, outline your problem and let us apply our brush know-how. Write today.

HIGH PRECISION INDUSTRIAL BRUSHES TWISTED IN WIRE
The MILL-ROSE Company 1985 EAST 59th STREET CLEVELAND 3, OHIO

▲ For more details circle NED-614 F4 on enclosed inquiry slip ▲



Saves time and money inspecting small dimensions

● Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

price only $36.00 order today

a product of BELL & HOWELL CO. distributed ONLY by

See Your National Tool Co. Representative or Local Jobber
NATIONAL TOOL CO.
Write for FREE descriptive folder

11210 Madison Avenue Cleveland 2, Ohio

▲ For more details circle NED-615 F4 on enclosed inquiry slip ▲

Easily-installed units for high-efficiency air movement in all duct systems. Direct-driven types for atmospheres within safe motor operating limits or belted models for hazardous fumes, vapors and excessive temperatures. Sizes 12" to 84" with 2, 4, 6, or 7 blades. Capacities to 120,000 C.F.M.

other models for every air-moving requirement

All Aerovent Fans are rated in accordance with the Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

Ask for free folder D-50!

Aerovent Fan Company, Inc.
Ash and Blake Streets Piqua, Ohio

▲ For more details circle NED-616 F4 on enclosed inquiry slip ▲

New THERMALINK

Automatic Electric

OIL PRE-HEATING UNITS

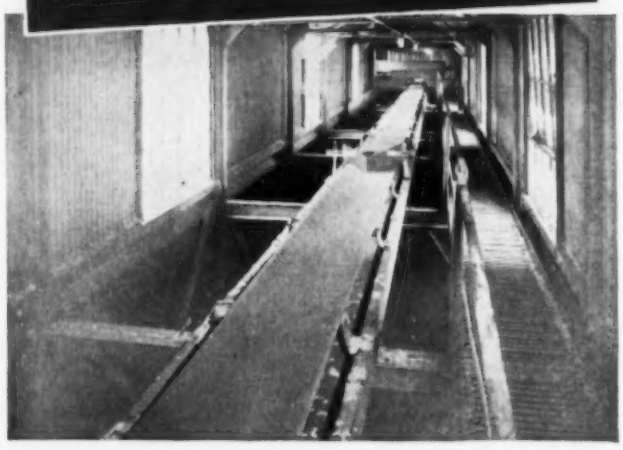
★ Integral adjustable thermostat eliminates wiring problems.
★ Adjustable temperature dial marked in degrees.
★ Available with both thermostat and motor control built into unit.
★ No relays or auxiliary controls needed.
★ Available with pipe-thread or flange header.
★ Wattages from 1000 through 7500.
★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

For more details circle NED-617 F4 on enclosed inquiry slip

Better rubber products are made with Du Pont NEOPRENE



Neoprene conveyor belt lasts 4 times longer than other types . . . saves $4,800 for plant

At a large California seed-processing plant, ordinary conveyor belts lasted only two years at most. Attack by oils from cottonseed, flax seed and soya beans separated the belt plies and caused surface blisters. And the V-shaped wooden "plows"—used to nudge seeds off the belt into storage bins—snagged the blisters and tore the belt covers.

Then a 5-ply belt with neoprene covers was installed. After eight years the neoprene belt shows no signs of deterioration or serious wear—*four times the service life of the other belts.* And its condition indicates it will be good for another two to four years! Savings on this one belt alone are already $4,800—another example of how neoprene's abrasion resistance, even after severe exposure to oil and grease, saves on replacement costs.

Longer service is typical of the important advantages that thousands of neoprene products are bringing industry today. While Du Pont makes no finished products of neoprene, your supplier of rubber goods will gladly tell you about the neoprene products he sells.

FREE! THE NEOPRENE NOTEBOOK

Each issue describes new neoprene products . . . improved old products . . . tips on reducing maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Div., NE-6, Wilmington 98, Delaware.

NEOPRENE

The rubber made by Du Pont since 1932

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

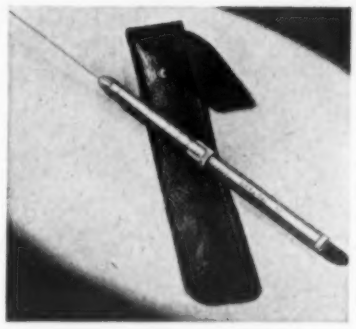
For more details circle NED-618 F4 on enclosed inquiry slip

FLOW PICKUPS
flow rates from 0.3 to 3000 gpm

Series FL flow pickups covering flow rates from 0.3 to 3000 gpm are applicable to rocket and turbojet engine testing and to dificult industrial flow measurements. Fluid flow drives freely spinning turbine wheel which generates pulses in externally mounted magnetic coil. Pulse frequency measures flow rate, while number of pulses measures volume. Design allows accuracies of ½ per cent at pressures up to 3500 psi, temperatures from −300 to 800° F and under severe shock and vibration. Range between maximum and minimum flow varies from 6 to 1 for ⅜-in. pickup, to 40 to 1 in larger sizes. Made by **Waugh Engineering Co.,** Dept. N., 15306 Dickens St., Sherman Oaks, Calif.

For more details circle NED-619 F4 on enclosed inquiry slip

TACHOMETER
measures cycles or revolutions



Instant cycles per minute or revolutions per minute readings are provided by the Vibra-Tak low cost pocket tachometer. It is made of aluminum with a wire reed indicator. Instrument's bullet nose is placed against a vibrating object, and the tuning slide is moved up and down until the reed reaches the maximum throw. Readings from 2000 to 15,000 are etched on the instrument and higher speeds can be estimated. Price is $5.00. Available from **Verdell Instrument Sales Co.,** P. O. Box 212 A, Burbank, Calif.

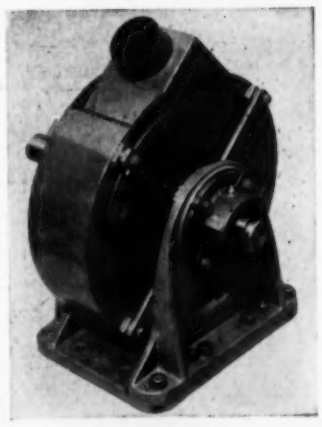
For more details circle NED-620 F4 on enclosed inquiry slip

CARTON STITCHER
does top and bottom stitching

Staple fastening of many kinds of containers is simplified by this carton stitcher which combines top and bottom stitching mechanisms. Easy-drive pendulum action gives operator extra speed for foot-operated machine. Staples for this machine are offered in many leg lengths up to 9/16-in. and in many colors for use in sales promotional type cartons. Made by **Heller Co.,** 2153-N Superior Ave., Cleveland 14, O.

For more details circle NED-621 F4 on enclosed inquiry slip

SAFETY & TENSION BRAKES
have controlled forced air cooling



Controlled, high velocity, forced air cooling incorporated in series 460 industrial safety and tension brakes serves to lower brake drum and lining temperature, counteract expansion and extend service life of brake. Cooling is offered for either self-contained or built-in type brakes. Six mounting positions of cooling housing are possible for former types, three each for clockwise and counterclockwise rotation of drum. Same housing is also used on built-in type brakes in any position. Cooling air, obtained from standard centrifugal fans or blowers at velocities up to 6000 fpm, makes one rotation of housing and is exhausted. External air supply is used to make cooling efficiency independent of rate of drum rotation. Made by **Linderman Devices, Inc.,** Dept. NED, Newburgh, N. Y.

For more details circle NED-622 F4 on enclosed inquiry slip

FLEX-A-FOAM FILTER MASKS

Dust protection your workers will welcome and wear *in even the HOTTEST weather*

★ **Ideal for Hot Weather** Filter's porous action absorbs and actually exhales body heat.

★ Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear — not hot and cumbersome like old-fashioned respirators.

★ Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

Your best *Ounce of Protection* against Irritating Dust

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced *quality* respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

Fewer filter replacements with Flex-A-Foam Filter Masks mean fewer lost production hours.

SAMPLE STILL ONLY $1.40 POSTPAID

FLEX-A-FOAM® FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-623 F4 on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

FASTER HANDLING *at less cost*

- 360° Swing • Self-Supporting
- Capacities from ½ ton to 5 tons
- Complete Line of Pillar, Mast and Wall Type Jib Cranes

Write for Catalog

CHICAGO TRAMRAIL CORPORATION

4000 West Washington Boulevard • Chicago 24, Illinois

OVER HEAD CRANES • STAK-RAK CRANES

MONORAIL SYSTEMS AND RACKS

For more details circle NED-624 F4 on enclosed inquiry slip

Enjoy THE ADVANTAGES OF HAVING TIME RECORDED

ACCURATELY AUTOMATICALLY EFFICIENTLY

THE NEW *Simplex* TIME RECORDER

This new Simplex Time Recorder figures payrolls easier, 50% faster—cuts payroll costs in half.

Vertical or horizontal print . . . Two color registration . . . Trigger-touch print . . . Direct subtraction . . . One-minute positioning . . . Attractive, indestructible case.

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N-106

Please give us more information on:

☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

Firm.....

Name.....

Street & No.....

City..... State.....

For more details circle NED-625 F4 on enclosed inquiry slip

Tourek

Revere GETS HIGH PRECISION FOR NEW LENS MOUNT!

Extreme accuracy is the priceless ingredient that makes a fine Screw Machine Part *finer!* That's why Revere Camera Co. "Turns to TOUREK" for their new 444 Slide Projector Lens Mount. Quality-minded manufacturers from coast to coast invariably discover a *dependability* about TOUREK Screw Machine Parts that deeply cuts production costs. Call us during the drawing board stage. Or send drawings, samples and specifications today.

SEND FOR *free Technical Folders containing useful Data on TOUREK Ball Joints, Pipe Plugs, and Screw Machine Parts. Use company stationery.*

J. J. TOUREK MFG. CO.
1901 SOUTH KILBOURN AVENUE, CHICAGO 23, ILLINOIS

.. UP TO 2-5/8" DIAMETER SINGLE AND MULTIPLE SPINDLE MACHINES ..
THREADING • TAPPING • MILLING • DRILLING • GRINDING • POLISHING • PLATING • HEAT TREATING • SILVER SOLDERING

WORLD'S LARGEST MANUFACTURER OF BALL JOINTS

For more details circle NED-626 F4 on enclosed inquiry slip

CAMCAR COLD-FLOW

WATCHES THE WASTELINE

Camcar Cold-Flow reduces metal *waste* to only 3% in the production of this part . . . a 75% savings over the old method. Cold-Flow keeps the waste in line . . . saves material . . . *forms* parts by metal flow . . . in contrast to older methods that *cut* parts from large diameter stock.

Cold-Flow works on a strict diet — in high and low carbon steels, copper, brass, aluminum, stainless and many others — creates intricate shapes to meet exacting assemblies . . . and in high volume.

The Cold-Flow principle of high speed metal flow increases part strength, lengthens life . . . for the metal grain smoothly follows the part contour. And Cold-Flow compresses outer fibres to achieve greater surface hardness . . . more wear resistance.

Send us requirements, specs and samples. Or ask for a field specialist.

CAMCAR SCREW & MFG. CORP.
ROCKFORD, ILLINOIS
Telephone: 5-9451 • Teletype: RK-8653

CAMCAR COLD-FLOW

For more details circle NED-627 F4 on enclosed inquiry slip

LIMIT SWITCH
roller-arm actuator is adjustable

Heavy duty limit switch listed as type 101ML1 has precision two-circuit switching action and is suitable for use under conditions of severe shock and impact. Snap-action spring accomplishes simultaneous make and break of both normally-closed and normally-open circuits. Aluminum enclosure is fitted with synthetic rubber gaskets which prevent entrance of moisture or foreign matter. Roller-arm actuator is adjustable in the field to any of four positions at 90-degree intervals. Electrical rating is 10 amp at 110, 220 or 440-v ac, and pilot duty rating is 6 amp at 125-v ac. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-628 F4 on enclosed inquiry slip

HEAVY DUTY MILL BEARINGS
in 2-7/16 to 6-15/16-in. shaft sizes

Precision self-aligning roller bearings in steel pillow block housing are incorporated in this heavy duty mill bearing designed to withstand heavy loads and severe impacts found in mill operations. Split housing has heavy sections, strong base and cap, plus large studs, dowels and mating surfaces. Bearing aligns itself instantly without impairing full load carrying capacity, even under minor shaft deflections. Units, identified as series LPK6800F, are made for shaft diameters from 2 7/16 to 6 15/16 in. by **Link-Belt Co.,** Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

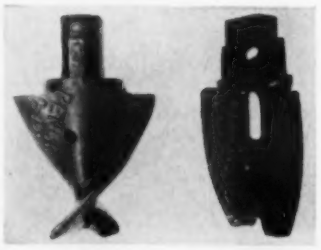
For more details circle NED-629 F4 on enclosed inquiry slip

CIRCUIT BREAKER
two-pole has common tripper bar

Feature of EQ two-pole molded case circuit breaker for use in panelboards, load centers or individual enclosures is a common tripper bar arrangement. Compact unit is twice the width of EQ single pole design and combines magnetic and thermal tripping for protection both against small overloads and short circuits. Breakers have arc chutes, silver alloy contacts and a quick-make quick-break trip-free mechanism. They are factory-calibrated at 25° C and sealed to prevent tampering. UL approved, they are available in ratings from 10-50 amp, 120/240 v ac, 5000 amp interrupting. Made by **I-T-E Circuit Breaker Co.,** 1900 Hamilton St., Philadelphia 30, Pa.

For more details circle NED-630 F4 on enclosed inquiry slip

EARTH AUGER BITS
for use in frozen ground



Narrow fishtails that easily open a small hole in frozen ground and other hard surfaces are designed into Pengo combination Fishtail - Hardpan and Cone earth auger pilot bits. Both pilot bits are interchangeable between all types and sizes of augers and boring heads made by this company. Tools serve to break out the hardpan or frozen ground through which the center shaft of the auger may pass. Forward curving of the moldboards, together with their spiraling position, make them self-sharpening. Made by **Petersen Engineering Co.,** Dept. NED, 460 Kifer Rd., Santa Clara, Calif.

For more details circle NED-631 F4 on enclosed inquiry slip

SPEED OHIO REDUCERS for every industrial purpose

Years of engineering experience, combined with the most modern equipment and quality materials go into the manufacture of Ohio Gear speed reducers. Every detail of production and workmanship is designed to insure accuracy, durability and years of trouble-free operation.
Illustrated above are a few applications by large manufacturers who depend on Ohio Gear.

1. Ohio Gear DPL Speed Reducer operating a paint booth turn-table in a large metal working plant.
2. Ohio DS Speed Reducer, 300 to 1 ratio, used in the drive of a machine which automatically welds both heads into the shell of a 55 gallon barrel.
3. A PL2 Reducer, 40 to 1 ratio, operating the turn-table of a machine automatically welding automobile crankshaft vibration dampers.
4. Ohio Gear DHU Speed Reducer operating an overhead scrap conveyor belt in a large die casting plant.
5. Series of Ohio Gear HS Speed Reducers operating conveyors in a California fruit packing plant.

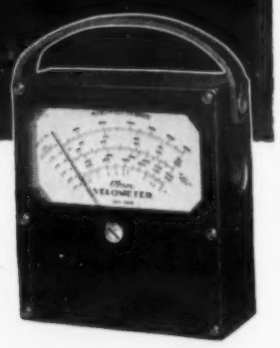
Consult your nearest distributor or write us for complete information.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 East 179th Street • Cleveland 10, O.

OHIO GEARS

For more details circle NED-632 F4 on enclosed inquiry slip

READ AIR VELOCITIES *instantly... accurately... anywhere...*



...WITH THE

ALNOR VELOMETER

Alnor Velometer, a precision-built, self-contained, portable instrument, gives you instant, *accurate* readings of air velocities anywhere—in plants, mines, mills or laboratories. Measures speed of air flow through ducts, grilles, furnaces, spray booths or in the open. This rugged instrument needs no special care or delicate handling—anyone can use it and get accurate readings. Needs no calculations or reference charts. Available in a wide variety of scale ranges, and with a full assortment of jets and fittings for every application. You'll want full details and prices, so write for Bulletin 2448-G, Illinois Testing Laboratories, Inc., Room 529, 420 No. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-633 F4 on enclosed inquiry slip

WILLSON HEAVY DUTY CUP GOGGLES

FOR DEPENDABLE, COMFORTABLE, PRACTICAL EYE PROTECTION

Kover-Mor* Goggles—Large size, small weight, great comfort symbolize these *molded nylon cup* goggles. They provide ample room for comfortable wear over modern, heavy-frame prescription glasses. Rigid metal top bar insures easy handling. Adjustable head-band and screened leather bridge assure fit and comfort. Style CC70 with four screened ports and Super-Tough® lenses for chippers. Style CW70 with indirect ports, Willson-Weld® filter lens and Spatter-proof® cover glass for welders.

TAW50—Strong, light weight, molded eye cups are scientifically designed to fit all faces. Large, perforated ventilation screens and ventilated metallic lens retaining rings add to comfort and clear vision. Both head-band and plastic covered chain bridge are adjustable. Super-Tough® 50 m.m. lenses resist heavy impact.

CC60—These Cover-All® cup goggles can be worn comfortably over normal size prescription glasses. Large perforated ventilation ports and ventilated external, metallic lens retaining rings reduce fogging to a minimum. Two-piece head-band and leather-curtained nose bridge are adjustable for wearer comfort.

*Trademark

See your Willson distributor today for complete information, prices and immediate delivery of Willson Spectacles, Cup Goggles and Respiratory Protective Equipment.

WILLSON

WILLSON PRODUCTS, INC., 219 Washington Street, Reading, Penna.

For more details circle NED-634 F4 on enclosed inquiry slip

PROBLEM: To get accurate positioning from female centers.

ANSWER: Lap the centers.

Ex-Cell-O Center Lapping Machines correct inaccuracies of rough centers, assuring GREATER PRECISION from your present equipment. Center lapping reduces manufacturing costs by minimizing waste from grinding rejections; decreases assembly time because of closer tolerances; All the facts are in Bulletin No. 40271. Write Ex-Cell-O for a copy today.

53-29

CENTER LAPPING MACHINES BY EX-CELL-O CORPORATION DETROIT 32, MICHIGAN

XLO

For more details circle NED-635 F4 on enclosed inquiry slip

Break Loading Bottlenecks!

With MagLiner MAGNESIUM DOCK BOARDS

Magnesium Light!

Magnesium Strong!

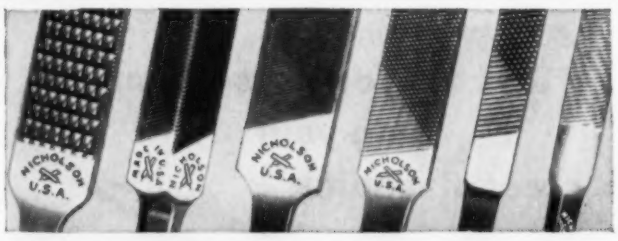
Magnesium Safe!

Write today for your copy of Magliner Bulletin DB-204

Have you considered the advantages of equipping your docks with Magliner magnesium dock boards? Are you aware of the many benefits awaiting you? *Reduced loading costs! Easier handling! Greater speed and efficiency in shipping-receiving operations!* In the case illustrated above, the manufacturer took positive steps to insure against the penalty of loading bottlenecks . . . he investigated and installed Magliner magnesium dock boards! What about you? It costs nothing to get the facts! It can keep you steps ahead of the competition!

MAGLINE, INC.
P. O. BOX 396 PINCONNING, MICH.

For more details circle NED-636 F4 on enclosed inquiry slip



These fine files typify

QUALITY

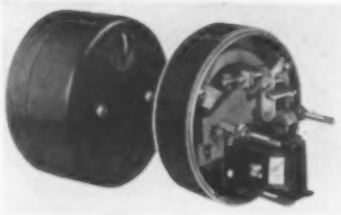
that can be easily seen—
readily proved in use—
noticeably shown in longer file life, better work, higher production, lower operating costs

"File Filosophy"—FREE
48 illuminating illustrated pages on kinds, use and care of files. Send for it.

NICHOLSON FILE COMPANY
34 Acorn St., Providence 1, R. I.
(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ont.)

NICHOLSON FILES
FOR EVERY PURPOSE

MAGNETIC BRAKES for NEMA rerated motors



Line of 40 and 50 series magnetic disk brakes is designed to meet rerated NEMA frame standard for 1/20 to 1/3-hp and for 1/6 to 2 hp. Series 40, for the lower ratings, has a torque range from 6 lb-in. to 1 lb-ft. It is designed for mounting on standard NEMA C end bell for motor frames 42-C and 48-C and is also available for independent floor mounting. Series 50 is available in torque ratings of 1½, 3, 6 and 9 lb-ft. It is designed to mount on fractional horsepower frames 56-C and 66-C and integral horsepower frames 182 and 184. It requires less than one-half of former mounting space. Made by **Stearns Magnetic, Inc.**, 653 S. 28th St., Milwaukee 46, Wis.

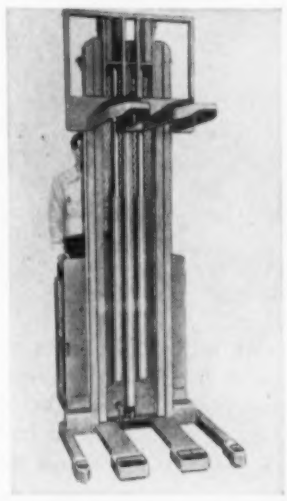
For more details circle NED-637 F4 on enclosed inquiry slip

WIRELESS INTERCOM improved, for industrial use

Improved model Hirshcall wireless intercom especially suited for industrial use allows plant-to-plant, intra-plant or inter - departmental communication, even though stations are as much as 2½ miles apart. System frees telephones for outside calls and combines services of watchman (on constant transmission) and messenger (on talk-listen). Unit plugs into any electrical outlet and requires no wiring or installation. It transmits sound clearly over radius of several miles and is UL-listed as safe against shock or fire hazard. Made by **S. A. Hirsh Mfg. Co.**, Dept. NED, 8051 Central Park Ave., Skokie, Ill.

For more details circle NED-638 F4 on enclosed inquiry slip

ELECTRIC FORK TRUCK for narrow aisle warehouse uses



Pallet loads can be right-angled into storage spaces from aisles only 6 ft wide with this electric fork truck designed for use with skids, open face or four-way entry block type pallets where high lifts are required. Unit is modified straddle truck with four base legs. A pair of 5 x 2-in. load wheels straddle the pallet while 7-in. wide elevating forks lower over another set of base legs with dual 5 x 2-in. wheels. This arrangement provides for maximum stability at elevated heights up to 158 in. and minimizes excessive wheel and floor wear. Made by **Raymond Corp.**, 41-120 Madison St., Greene, N. Y.

For more details circle NED-639 F4 on enclosed inquiry slip

VERTICAL FLASH TRIMMER used on welded rings and cylinders

Flash can be removed from the inside and outside of thick wall welded rings and cylinders by the vertical flash trimming machine. It has a capacity of ¼-in. minimum to ¾ - in. maximum thickness and from 6-in. minimum inside to 24-in. maximum outside capacity. Machine is made in sizes for trimming, 4, 7 and 10-in. lengths of work. Once the piece to be trimmed is placed in the hydraulically operated machine, operation is automatic to completion. Cutting speed is 60 fpm. Made by **Morton Mfg. Co.**, Broadway & Hoyt, Muskegon Heights, Mich.

For more details circle NED-640 F4 on enclosed inquiry slip

GRIPPER WOVEN WIRE SLINGS SAFER—MORE VERSATILE

SAFER—because each sling is *pre-tested* to rated load capacity before shipment, with a 5-1 safety factor. Moreover, the spiral loop construction of Gripper slings guards against sudden breaks in use . . . specially heat treated handles provide extra strength at the hook.

MORE VERSATILE—use your Gripper sling for light or heavy, bulky or compact loads of any material or parts. Fully flexible sling body grips completely around even small radius loads in choke hitch. Broad, flat sling body provides wider bearing surface for greater load stability in either basket or choke hitch.

AVAILABLE—in standard lengths and widths with capacity up to 100,000 lbs. Special sizes and capacities on request. For details, see your mill supply, materials handling or safety equipment distributor. Or, write direct for free catalog and name of nearest distributor.

The Cambridge Wire Cloth Co.
Dept. R • Cambridge 6, Md.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN LEADING INDUSTRIAL AREAS

DEALERS—write for open territory data.

For more details circle NED-641 F4 on enclosed inquiry slip

LepeL's 3 new

LOW COST • PORTABLE HIGH FREQUENCY *Induction* HEATING UNITS

Ideal for . . . .

- Production Heating of small parts
- Educational Institutions
- Research Laboratories
- Machine Shops
- Tool Rooms

MODEL T-2½-1 Electronic Tube Operated $1620. f.o.b. factory

MODEL 2 KW Spark Gap Operated $870. f.o.b. factory

MODEL T-1 Electronic Tube Operated $885. f.o.b. factory

HARDENING
MELTING • BRAZING
ANNEALING • SOLDERING

The Lepel line of induction heating units represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating. With a background of half a century of pioneering electrical and metallurgical experience, the name Lepel has become the symbol of induction heating equipment embodying the highest standards of engineering achievement, dependable low cost operation and safety.

Amazing in its speed, Lepel equipment reduces the time required for hardening, annealing, stress relieving, brazing, soldering and melting from minutes to seconds. It performs these operations with a degree of precision and uniformity rarely attained through other processes.

LEPEL Electronic Tube GENERATORS available from 1 kw. to 100 kw.
LEPEL Spark Gap CONVERTERS available from 2 kw. to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information on high frequency induction heating.

All Lepel equipment is certified to comply with the requirements of the FCC.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-642 F4 on enclosed inquiry slip

CAPCO Dock Covers completely enclose the space between car and building doorways protecting loading and unloading during bad weather...preventing accidents... insuring against loss of heat or refrigeration. 51 different models in any size for every loading problem.

CAPCO

Write for literature and name of nearest distributor.

622-24 PROSPECT AVENUE • KANSAS CITY 24, MISSOURI

For more details circle NED-643 F4 on enclosed inquiry slip

NEW INFORMATION

for men who...

SPECIFY
SELECT
INSTALL
OPERATE
MAINTAIN BOILERS!

If you are concerned in any way with boilers for industrial plants or any kind of buildings, get this new booklet . . . just off the press . . . describing and illustrating the many time-saving, cost-cutting advantages of the . . .

MODEL 4 Powermaster®

PACKAGED AUTOMATIC BOILER

15 to 100 HP

Now you can get packaged boiler units in these capacities *with complete fuel flexibility*—oil, gas, or combination oil and gas firing. Compare, and you'll see why the *Powermaster* Model 4 is your best buy in packaged automatic boilers of small and medium capacities for hot water or steam requirements. Other *Powermaster* units are available in capacities up to 500 hp.

Architects
Consulting Engineers
Contractors
Plant Engineers
Power Engineers
Building Managements

Send now for BULLETIN 1230

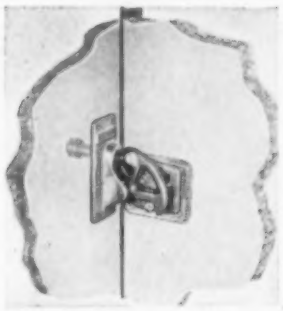
List your requirements and operating conditions on your company letterhead.

ORR & SEMBOWER, INC.

Morgantown Road, Reading, Pa.

For more details circle NED-644 F4 on enclosed inquiry slip

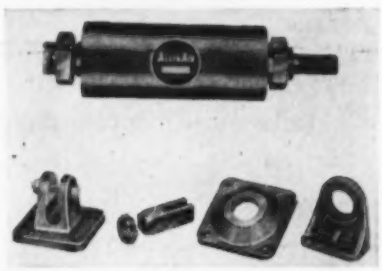
DOOR CATCH
supports door weight



Out-of-line sagging machine, cabinet and other doors are eliminated by this catch and locking mechanism. Unit engages over the lock-pin with cam action which locks and supports door weight at same time. Lock is operated with a hex-head type crank and is provided with means for adjustment in any direction. Made by **Silver-King Corp.**, Dept. PC, Aurora, Ill.

For more details circle NED-645 F4 on enclosed inquiry slip

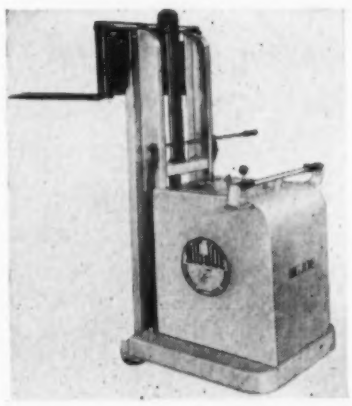
DOUBLE-ACTING CYLINDERS
1⅛, 2 or 3-in. bore, any stroke



Line of double-acting cylinders for air, water or low pressure hydraulic operation include 1⅛, 2 or 3-in. bore, any stroke and either single ended or double ended piston rods. Cylinders use Thomson Nylined bearings and Copper-brited honed cylinder tubes for corrosion resistance. Compactness and ease of disassembly is achieved by fastening heads squarely to cylinder tube with hardened steel snap rings reground flat and parallel. Adjustable cushions are available front or back on 2 and 3-in. sizes. Interchangeable foot, flange and clevis mounts facilitate mounting in any manner or position. Made by **A. K. Allen Co.**, 57 Meserole Ave., Brooklyn 22, N. Y.

For more details circle NED-646 F4 on enclosed inquiry slip

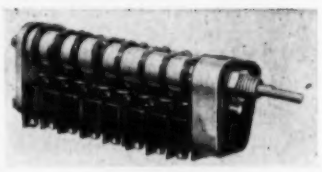
FORK LIFT TRUCK
hand propelled and battery operated



Double-faced pallets, wire coils, tote pans, rolls, dies, jigs and carboys can be handled by the Counterweighter lightweight battery - operated, hand - propelled hydraulic fork lift truck. It features light counterweight, 1000-lb capacity and low overall height. Truck is equipped with adjustable forks and can be given a ram attachment for lifting cylindrical items. Roll handling attachment is also available. Made by **Big Joe Mfg. Co.**, 908 W. Jackson Blvd., Chicago 7, Ill.

For more details circle NED-647 F4 on enclosed inquiry slip

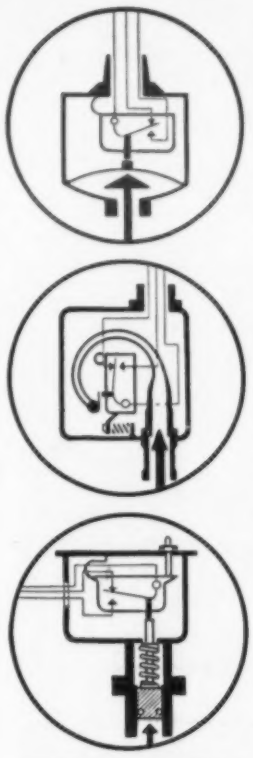
ROTARY SELECTOR SWITCHES
control up to eight circuits, are offered with two-circuit basic units



A means of switching up to eight different circuits with one compact assembly is provided by series of subminiature rotary selector switches available with from two to eight switching units and from two to eight detent positions. Virtually any switching sequence is possible. Units are panel-sealed, less than 4-in. long and require only 1 17/64-in. diameter mounting surface. Compactness is achieved with use of ultra small, single-pole, double-throw switching units. They are available with drilled, solder-type or wrap-around, turret terminals and are rated for inductive load of 3 amp at 30 v dc and 10 amp at 125 or 250 v ac.

Also offered is new TB series of snap-action double-break basic switches for control of two isolated circuits. Their ½ x ½ x 1¼ in. size makes them useful on reversing circuit applications where space is at premium. Switches are rated 10 amp at 125 or 250 v ac and 10 amp at 30 v dc, inductive. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-648 F4 on enclosed inquiry slip



HOW TO SELECT THE CORRECT PRESSURE SWITCH FOR YOUR APPLICATION

This handy guide clarifies the seemingly complex problem of pressure switch selection, by narrowing the choice down through four consecutive steps. The first step determines the degree of sensitivity, with listings of typical applications. Next the required proof pressure limit. Third the function of the switch, such as single, dual, or pressure difference control. And fourth the desired detail features, like, explosion proof, housed, stripped, etc. This method leads you to specific standard models, tailored to your application, and, you don't have to be an expert to find the correct answer. Write for bulletin M-3.

BARKSDALE VALVES

5125 ALCOA AVE., LOS ANGELES 58, CAL

For more details circle NED-649 F4 on enclosed inquiry slip

The Colson® Universal Drum Truck

Makes LIGHT of Heavy LOADS

Handling drums or barrels the COLSON Universal Drum Truck lets one man do the work of two. Any size container may be locked between the adjustable climb hook and pick-up tips. COLSON'S leverage lift prevents strain. Even heavy loads move easily on the 10" steel disc wheels with cushion rubber tires.

Other time and labor-saving COLSON Materials-Handling equipment includes hand trucks, platform trucks, Lift-Jack systems, and wheels and casters for every industrial application.

Write for Free Catalog on Colson Materials-Handling Equipment

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • LIFT-JACKS • INDUSTRIAL TRUCKS

For more details circle NED-650 F4 on enclosed inquiry slip

AIM for preset tension on your steel strapping

Acme Steel offers the only complete line of PNEUMATIC STRETCHERS

These new time-saving Acme Steel Strapping Tools can be set in advance for uniform, consistent tension. There's no guesswork. The Pneumatic Stretchers do the work—reducing employee fatigue. There are Acme Steel Pneumatic Stretchers for tensioning strapping on all sizes and shapes of containers, packages and bundles . . . and a model to suit your needs. For details, write Acme Steel Products Division, Dept. JK-64, Acme Steel Company, 2840 Archer Avenue, Chicago 4, Illinois.

AIM *for Safe, Lower-Cost Shipping* ACME STEEL

For more details circle NED-651 F4 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with 79E BOND

Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & *Mfg. Co.*
Dept. NED · 1101 West Monroe Street, Chicago 7

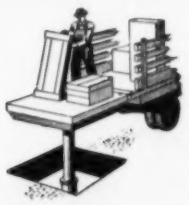
For more details circle NED-652 F4 on enclosed inquiry slip

Rotary®

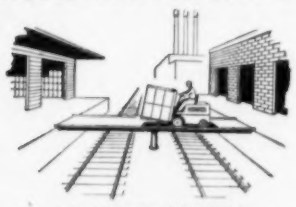
Oildraulic® Power

cuts the cost of lifting heavy loads

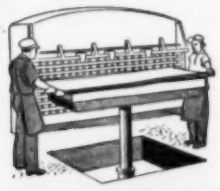
LEVA-DOCK RAMPS
Self-leveling hydraulic ramp



LEVELATOR LIFTS
For raising and lowering heavy loads



TRANSFER BRIDGES
Recess between tracks when not in use



PRODUCTION LIFTS
For faster, less costly machine feeding

Circle the items you want catalogs on, tear out and mail to:

ROTARY LIFT CO.
1160 Kentucky, Memphis 2, Tenn.

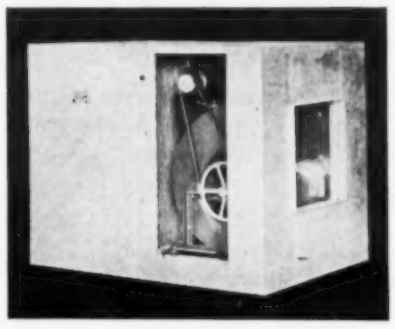
For more details circle NED-653 F4 on enclosed inquiry slip

CIRCULAR SAW BLADE
planer type is carbide tipped

Wide variety of cuts can be performed with this planer type carbide-tipped circular saw blade. It can be used for both ripping and cross-cutting operations and gives good finish on hand feed operations. Such materials as plywood, plastics, Micarta, Masonite and laminated products can be cut efficiently. Identified as Karbide King, it is made in 8, 10, 12, 14 and 16-in. sizes. Special sizes are also available. Made by **DeLuxe Saw & Tool Co.**, High Point, N. C.

For more details circle NED-654 F4 on enclosed inquiry slip

AIR COOLERS
for air conditioning applications



Evaporative type air coolers are designed for air conditioning applications and are available with capacities ranging from 2500 to 12,000 cfm air. Air entering cooler intake is pulled through a fine atomized water spray where it is partially cooled and washed and then through two sets of pads where evaporation and drying take place. It is then discharged by a centrifugal low velocity blower. Either glass fiber or zinc electroplated wire mesh evaporative pads are available. Coolers are rated at better than 80 per cent efficiency and give temperature drops ranging from 20 to 30° F. Made by **Hayes Furnace Mfg. & Supply Co.**, Dept. A.C., 2929 S. Fairfax Ave., Los Angeles 16, Calif.

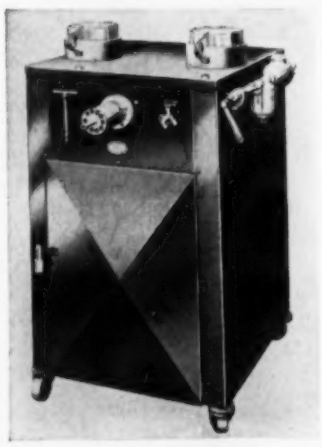
For more details circle NED-655 F4 on enclosed inquiry slip

SELF-ADHERING LABELS
withstand temperature extremes

Self-adhering labels which take pen, pencil and type markings or can be printed to order are formulated to withstand extremes of temperature and humidity without loss of tackiness. Labels packaged in roll form also withstand effects of oil and grease. Types available include Time Tape, a white continuous roll in from ¾ to 2-in. widths and Time Labels, which are white labels with a red border in sizes from ¾ x 1 to 2 x 3 in., also packaged in roll form. Hand or table dispensers are available. Made by **Professional Tape Co.**, P. O. Box 41, Riverside, Ill.

For more details circle NED-656 F4 on enclosed inquiry slip

LIQUID POLYMER MIXER
disperses compound at 1 lb/minute



Proper mixing and dispersing of equal part Thiokol liquid polymer compounds, widely used for sealing, is possible with Pro-Seal master mixer and hand filleting gun. Curing agent and liquid polymer are conveyed through equalized metering gear pumps into mixing head. Mixed compound is dispersed at rate of 1 lb per minute by the mixer which handles 2 gallons or 20 lb of compound without reloading. Pro-Seal hand filleting gun has capacity of 1 lb of compound and is used on smaller applications. Equipment is presently used in aircraft industry for sealing and filleting with liquid polymer compounds. Potential application is in mixing and dispensing Thiokol liquid polymer-epoxy resin compounds. Made by **Coast Pro-Seal & Mfg. Co.**, Dept. N, 1507 Grande Vista Ave., Los Angeles, Calif.

For more details circle NED-657 F4 on enclosed inquiry slip

COOL PALM-COATED GLOVES

Safely handle sharp, abrasive or slippery materials. Outwear canvas and leather palms.

No. 61-W

No. 93

VENT-BACK TYPE

Grab-it No. 61-W: Palm coated with non-slip, highly cut-resistant rough natural rubber.

FABRIC-BACK TYPES

NEOX No. 93: Palm coated with specially reinforced neoprene for combined resistance to cutting, abrasion, grease, chemicals, heat.

Monkey-Grip and **Grappler** plastic palm styles, the latter coated with reinforced DUROX which retains its grip when wet.

Grab-it natural rubber palm; non-slip coating, in knit-wrist and safety-cuff styles.

Test Offer to Employers

Tell us your operation, materials handled, temperature condition. We will recommend the correct glove and send free samples for testing on-the-job.

Edmont
Edmont JOB-FITTED GLOVES

Edmont Manufacturing Co.
1240, Walnut St., Coshocton, Ohio

For more details circle NED-658 F4 on enclosed inquiry slip

SHELDON
CHICAGO U. S. A.

OFTEN PAYS OUT ON THE FIRST JOB...
and gives additional years of "cost free" service.

In the past, lathes were generally bought as large and as heavy as possible to insure accuracy and sufficient power. Now, with accurate, low-cost Sheldon Precision lathes, it is more profitable to buy these faster, cost-cutting lathes for the specific job at hand just as you would buy jigs and fixtures.

In savings of tooling costs, operator cost, power cost, and plant loading, as well as extra profits from more pieces per hour, Sheldon lathes often pay back their cost on a single run.

Sheldon lathes will work to the closest tolerances—have "Zero Precision" Taper Roller Bearings. They can take a healthy cut when operating at high speed direct drive—have double V-belts to the spindle. They will swing 10", 11" or 13" and have a 1⅛" hole through the spindle—have sufficient capacity for the great bulk of lathe work. Sheldon lathes have created a new factor for figuring machinery costs. They are tools you should know about.

Write for Catalog

SHELDON MACHINE CO., INC.
4215 N. Knox Ave. Chicago 41, Illinois

For more details circle NED-659 F4 on enclosed inquiry slip

SAVE 50% and more in Labor-Material with FencPainteR

For
WOOD · METAL
BRICK · STONE
CONCRETE

Hundreds of industries and institutions all over America are using the FencPainteR applicator system of painting at immense savings. It's five times faster than brushing methods. Irregular and corrugated surfaces painted with the same facility and covering power as smooth surfaces. One concern painted 6 ft. wire fence at a total cost of only 20c per lin. ft. FencPainteR enamels contain only top-notch ingredients — go much farther — are more economical in the long run.

SPECIAL TRIAL OFFER — Including industrial size FencPainteR and 5 gal. FencPainteR aluminum enamel, 1 gal. solvent. Complete, only **$57.00.** Enough to do 300 lin. ft. of 6 ft. chain link fence. (Add $5.00 for gray, white or black — $10.00 for red or green).

THE ONLY ROLLER MADE WITH CAPILLARY ATTRACTION (PAINT HOLDING POWER)

FencPainteR Corporation
2314 W. Van Buren Street Dept. NE Chicago 12, Ill.

MAIL COUPON for new 32 page illustrated brochure with full details covering FencPainteR products and their use.

FencPainteR Corp., 2314 W. Van Buren St., Dept NE Chicago 12, Ill.
☐ Please rush Free 32 page Brochure
☐ Send Special Trial Offer, complete
(Color desired _____) $ _____
Name _____
Address _____
City _____ State _____

For more details circle NED-660 F4 on enclosed inquiry slip

These new insulated closure units are available in a wide range of sizes to meet every individual requirement. Designed for smart modern appearance as well as weather and watertight service, Overbeke-Kain access doors can be used on transformer vaults, weatherproof rooms, marine bulkheads, test rooms and similar applications. A readily adjusted or replaced neoprene rubber gasketing assures a positive seal at all times.

Standard units are all welded steel construction. Stainless steel, aluminum, or other noncorrosive materials are also available.

the Overbeke-Kain company

Write today for Bulletin 784 for complete information.

20979 Aurora Rd. • Bedford, Ohio

1849-OK

For more details circle NED-661 F4 on enclosed inquiry slip

Find Out About

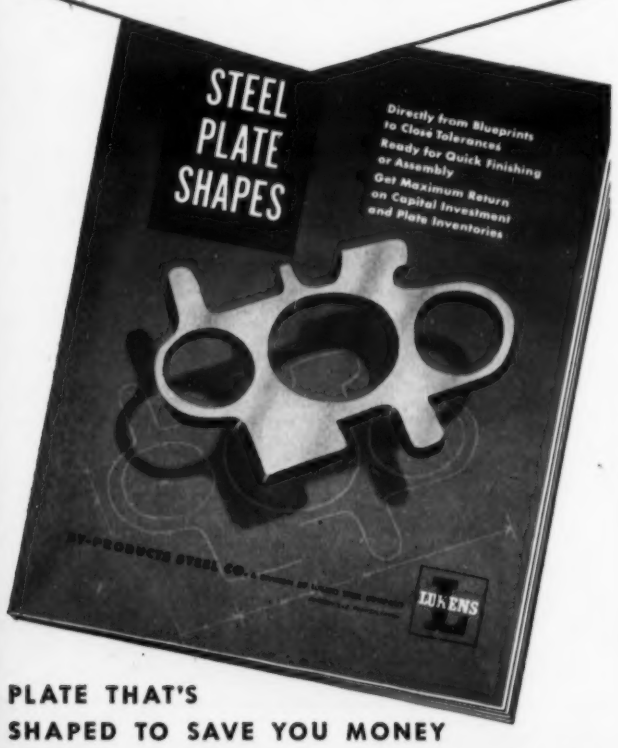


PLATE THAT'S SHAPED TO SAVE YOU MONEY

You save both time and money using this new Steel Plate Shapes Service. Find out how you can start production several steps ahead. You can eliminate plate inventories, and you pay freight only on that part of the plate that is actually required.

There's no need to invest in new cutting and forming equipment for your own shops. We have over 150 major machines to flame-cut, shear, blank, press, bend or otherwise form steel plate.

This new Bulletin 712 shows how Steel Plate Shapes Service can help you. For a free copy, use this coupon or write on your company letterhead.

LUKENS

BY-PRODUCTS STEEL CO.

A DIVISION OF LUKENS STEEL COMPANY

By-Products Steel Co.
Division of Lukens Steel Company
676 Strode Avenue, Coatesville, Pa.

Please send me a free copy of Bulletin 712.

NAME _____

TITLE _____

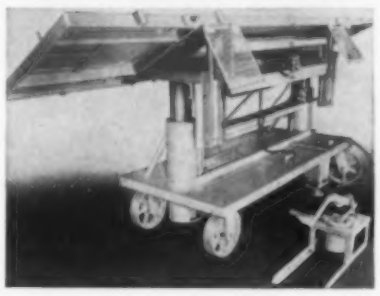
COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

For more details circle NED-662 F4 on enclosed inquiry slip

SHEET FEEDING TABLE
has hydraulically tilted top

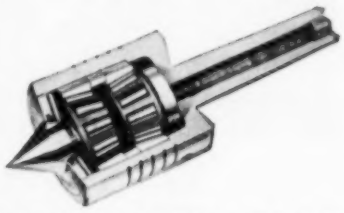


Feeding of stock into an inclinable bed press is facilitated by this 3-ton capacity hydraulic sheet feeding table. It has a hydraulically activated tilt top and built-in safety guards. Of all welded construction, table is operated by a two-speed foot pump. A two-way valve controls both tilt and elevation. Ten-inch steel casters with roller bearing hubs, floor lock and drop sides for expanding table size are other features. Made by **Rack Hydraulic Equipment Corp.**, Dept. N-1, Connellsville, Pa.

For more details circle NED-663 F4 on enclosed inquiry slip

LIVE CENTER
withstands loads up to 5200 lb

Accuracy and load carrying capacity are features of the Universal live center. It will withstand maximum loads up to 5200 lb and is suitable for speeds from 50 to 2000 rpm. It is available with Nos. 2 through 5 Morse tapers. Eccentricity tolerance is held to ±0.0001-in. through use of twin precision roller bearings which are preloaded after assembly. Point is ground in its own bearings also after assembly. Double seal Hycar ring keeps dirt and chips out of the interior and a rotating slinger assists in retaining lubricating grease. Made by **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.



For more details circle NED-664 F4 on enclosed inquiry slip

HEAVY DUTY SANDER-GRINDER
for continuous production service

All types of surfacing operations can be performed at continuous production rates by 7-in. heavy-duty sander-grinder available with no-load spindle speed of either 5200 or 6000 rpm. Housing is designed so that air from motor is deflected away from operator. Guards prevent enclosed switch from being knocked on accidentally. Removable side handle mounts on either side. This 14-16 tool can be used with abrasive disks, saucer grinding wheels, rotary planer heads and wire cup brushes. Standard operation is on 115 or 220 v. Made by **Black & Decker Mfg. Co.**, 762 E. Pennsylvania Ave., Towson 4, Md.

For more details circle NED-665 F4 on enclosed inquiry slip

HAND SCREW MACHINE
spindle driven by timing belt

Mechanical reverse incorporated in the model No. 73 hand screw machine makes possible instant reversal without disturbing the continuous forward operation of the motor. Hardened and ground self-centering bed has two symmetrically beveled sides for alignment of all attachments. Headstock spindle is driven by a timing belt. Drive is enclosed in the pedestal cabinet and features infinitely variable speeds up to 3500 rpm. Instantaneous high-low speeds in a ratio of 5 to 1 are obtained through a clutch. Other features are 1 hp motor and brake on headstock spindle of 1-in. collet capacity. Made by **Wade Tool Co.**, 39 River St., Waltham, Mass.

For more details circle NED-666 F4 on enclosed inquiry slip

NEW JABSCO PORTABLE SELF-PRIMING MOTOR-PUMP UNIT

Weighs only 29 lbs.
List Price $58.50

Jabsco announces the immediate availability of the outstanding Model 2187 Portable Motor-Pump Unit, *with capacity of 600 GPH at 10′ head.* Satisfied users find this versatile unit solves many pumping needs in industrial, farming, plumbing and marine uses. Model 2187 pumps coolants, circulates and transfers liquids, returns spilled liquids to process, drains cellars and sumps, pumps waste water to sewer, pumps out flooded basements, cesspools, and many other vital uses. Model 2187 is equipped with a close-coupled Jabsco bronze Pump with mechanical seal. Ports are threaded for standard ¾″ external garden hose connections, with ½″ IPS optional upon request. Heavy duty capacitor type ¼ HP Wagner electric motor with overload protector powers the unit. Motor is rated at 1725 RPM, 60 cycles—115 volts A.C. Comes with 6 ft. cord with ground wire and plug. Form-fitting handle folds away for easy storage. Also available at additional cost, D.C. motor units, 32 volt and 110 volt. Model 2187 is ready for instant use, and requires no additional equipment. No lubrication is required, no contamination of liquid pumped. Instantly self-priming with dry suction lifts to 15′, up to 25′ primed. For complete information, write **Jabsco Pump Company**, 2031 North Lincoln Street, Burbank, California. *Advt.*

For more details circle NED-667 F4 on enclosed inquiry slip

Steel SHOP and TOTE *Boxes*

*In quantity lots. Write for prices for quantity you need. Prices F.O.B. Michigan City, Indiana.

17½″ long x 8″ wide x 13″ deep
(Inside Dimensions)

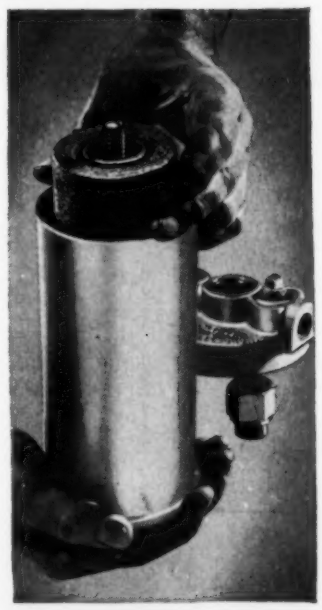
Why pay for 4 to 6 boxes and only get one? Thousands of manufacturers have used these boxes for years at great annual savings. You too can cut costs! Just tell us how many you need. We'll give you the lowest prices, fill your needs completely at savings up to 75%.

BARNES and SMITH CORPORATION
6521-C W. State Street • Milwaukee 13, Wis.

A 7611-1/9-R

For more details circle NED-668 F4 on enclosed inquiry slip

THIS SHOULD HAPPEN ONLY HALF AS OFTEN!



Eliminate half the cartridge replacements—select Cuno MICRO-KLEAN micronic filters.

Exclusive "graded density in depth" doubles dirt capacity, prevents clogging. Exclusive resinous impregnation and polymerization prevent shrinking, swelling, channeling.

When replacement *is* required—it's *quick* and *clean.* Housing easily disassembled.

Guaranteed densities: 10, 25, 50 microns. Capacities: from a few to over 800 gpm. Handles wide range of fluids, flow rates, viscosities.

Write for Bulletin MK-035. Cuno Engineering Corporation, 707 South Vine Street, Meriden, Connecticut.

CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

For more details circle NED-669 F4 on enclosed inquiry slip

Only Chromalox gives you a full selection of electric heaters to meet every need. Over 15,000 types, sizes and ratings to choose from, most available from stock—for heating gases, liquids, platens, dies, molds, ovens, soft metals and countless other materials. Chromalox Heaters are easily and inexpensively installed, provide concentrated, controlled heat that is dependable, economical, safe, clean and efficient.

Radiant Heat Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See also advertisement on page 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-670 F4 on enclosed inquiry slip

Lightweight HELIARC TORCH

is water-cooled...

FOR EFFICIENT INERT GAS WELDING AT LOW COST

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY

A DIVISION OF UNION CARBIDE AND CARBON CORPORATION

30 East 42nd Street UCC New York 17, N. Y.

Offices in Other Principal Cities

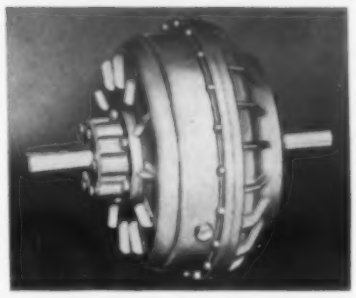
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The terms "Heliarc" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

For more details circle NED-671 F4 on enclosed inquiry slip

For more details circle NED-672 F4 on enclosed inquiry slip

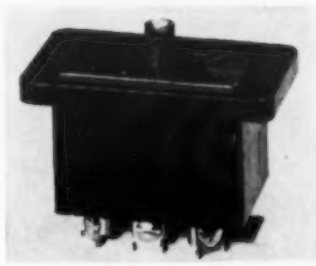
WIND ROLL DRIVE
for automatic winding and tensioning



Automatic winding and tensioning control is provided by Hydro-Wynd drive, which controls rough or uneven operation in such processes as winding textiles, paper, steel strip, rubber, wire and foil. Drive incorporates a fluid coupling and a planetary gear set. Models 12.2 and 8.4 feature construction improvements and larger capacity than former 8.4 and 7.4 units. Gear train has been rearranged, bearings are better spaced and a carbon-to-Meehanite spring-loaded seal is provided. Made by **Twin Disc Clutch Co.**, Dept. N, Racine, Wis.

For more details circle NED-673 F4 on enclosed inquiry slip

MOTOR PROTECTION SWITCH
for use with three-phase motors



Designed to protect three-phase electric motors against overloads and overheating, Triplex miniature circuit breaker and switch design is available in built-in and surface types with or without manual release. Overall length is 2.342-in., height 1.614-in. and width 1.673-in. Conservatively rated bimetal thermal overload device is fitted on a Steatite base. Simple release mechanism provides reliability with rapid restoration of circuit after operation. Maximum voltage rating is 500 v ac and current ratings are from 0.1 to 25 amp. Distributed by **E-T-A Products Co.**, Dept. E, 915 W. Oakdale Ave., Chicago 14, Ill.

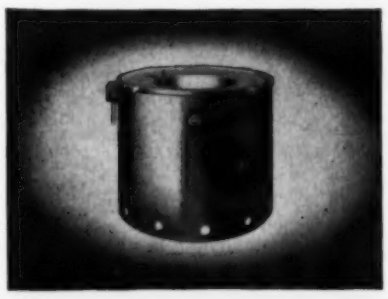
For more details circle NED-674 F4 on enclosed inquiry slip

CAPACITOR-RESISTOR BRIDGE
is multipurpose testing instrument

Capacitor-resistor bridge BF-60 quickly measures important characteristics of substantially all types of capacitors and resistors and determines their quality. Capacity range is 0.00001 to 1000 mfd in four scales and resistance range is 100 to 5,000,000 ohms. Instrument detects opens and shorts, capacity between wires and shieldings and transformer windings and makes it possible to measure the insulation resistance of paper, mica and ceramic dielectric capacitors. Power-factor readings can also be rapidly made. High sensitivity amplified bridge circuit permits accurate and definitive readings. Adjustable direct current power supply and visual null indicator are furnished. Made by **Cornell-Dubilier Electric Corp.**, 1047 Hamilton Blvd., South Plainfield, N. J.

For more details circle NED-675 F4 on enclosed inquiry slip

ELECTRIC MELTING POTS
keep soft metals ready to pour



Such soft metals as babbitt, lead, solder and type casting metal can be held at proper pouring temperatures by line of melting pots. They are made in 150, 750 and 1500-lb sizes for solder and 170, 860 and 1710-lb sizes for babbitt melting. Temperature control of molten metal is provided by thermostat bulb immersed in metal and protected by cast iron tube. Wire coil heating elements for two largest units are spaced and supported by refractory insulators which are bolted together and fastened to heavy alloy top ring casting. This forms separate heating unit that is easily removed. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-676 F4 on enclosed inquiry slip

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and *Fittings*.....only **$36.00**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

For more details circle NED-677 F4 on enclosed inquiry slip

Waterless Gas Holder, Long Island Lighting Co., Garden City, N.Y.
Painting Contractor: Long Island Painting Co.
Aluminum Paint: Patterson-Sargent Co., New York and Cleveland

YOU, TOO, SHOULD PROTECT YOUR TANKS WITH ALUMINUM PAINT

Long Island Lighting has always used aluminum paint on this huge gas holder because aluminum paint covers well, gives a uniform, attractive coating so important on surfaces this large. Aluminum paint had served 7 years prior to repainting in November, 1952.

Long Island Lighting also uses aluminum paint on its propane tanks. They have found that aluminum paint's high reflectivity reduces pressure build-up caused by solar heat.

ALCOA does not make paint, but ALCOA Aluminum Pigments are used in more aluminum paints than any other brand. Special formulas have been developed by your paint manufacturer to solve individual problems. Paints made to these formulas actually cost you less, last longer, give utmost protection against heat, cold, sun, rain, smoke and fumes.

If *you* have a tank, smokestack, roof, boiler or other facility that needs the best protection, you should investigate aluminum paint. Write to ALCOA today for information.

FREE BOOKLET tells how to paint with aluminum.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

Aluminum Company of America, Paint Service Bureau
1788-F Alcoa Building, Pittsburgh 19, Pa.

Please send your free book, *Painting with Aluminum*. I plan to paint

Name_____

Company_____

Address_____

City_____ Zone_____ State_____

For more details circle NED-678 F4 on enclosed inquiry slip

SHOPPING FOR
LOW COST
CLASS B
Insulation?

Nothing on the market today excels the low priced Class B protection of Varflo Tubing and Sleeving

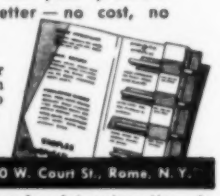
Flexible Varflo is solvent-, oil-, moisture-, flame-, and fungus-resistant. Passes the NEMA heat endurance test of 15 minutes at 225° C. Also passes 100 hours at 125° C. Will not lose dielectric strength when subjected to severe handling, bending and twisting. Has good shelf life.

Available in Grades A-1 and B-1 tubing and Grades C-1 and C-2 sleeving.

Let us help you with your problem. Describe it in a letter—no cost, no obligation.

Send for free folder containing description and samples of Varflo Tubing and Sleeving.

Varflex CORPORATION
Makers of Electrical Insulating Tubing and Sleeving



Varflex Corporation 510 W. Court St., Rome, N. Y.

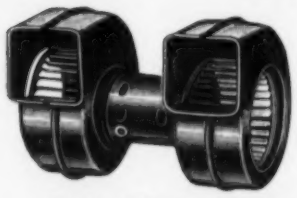
For more details circle NED-679 F4 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money

OVER 9,000 ITEMS INCLUDING

This special
CLOSEOUT Buy!



Redmond 200 CFM Double Blower

Made of heavy gauge steel, with 4¾" Torrington carefully balanced airotors delivering 200 Cu. Ft. per Min. Has 115 V, 60 C, 90 Watt, 1450 RPM type L double shaft rubber mounted motor.

53431 Each **$7.49** 6 Lots Each **$7.19**

Mounting Flanges
Steel 4¾" square flanges for mounting blower.
42764 Each **30c**

This Offer Subject to Prior Sale

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-680 F4 on enclosed inquiry slip

you pick up a roll
zip professional charts!

You can be a professional "draftsman" in minutes (so can anyone in your office.)

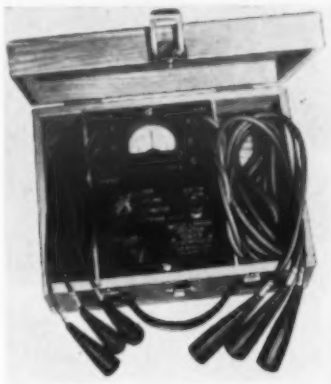
Everything you need to make an accurate, professionally drawn graph is pre-printed on self-sticking acetate tape! Lines, dotted lines, bars, people, coins, autos,—*everything!* Merely plot your dots—roll on whatever you want. Presto! A professional graph, without professional help, time or costs.

Write today for all the details on this revolutionary graph-making method! Chart-Pak materials also available for organization and flow charts, and office layout.

CHART-PAK, INC.
94F Lincoln Ave. Stamford, Conn.
Rush that Chart-Pak information to:
Name
Company
Address
City State

For more details circle NED-681 F4 on enclosed inquiry slip

ROTATION & PHASE TESTER
portable instrument weighs 10 lb.



Portable testing instrument is designed to determine the direction of rotation of electric motors before they are connected to the line and for determining phase rotation or sequence of energized power circuits. It is housed in an oak case, weighs 10 lb and is supplied with three line and three motor leads. It can also be used for determining polarity of power and instrument transformers or as a continuity tester in checking electrical circuits. Made by **James G. Biddle Co.,** Dept. 80-23, 1316 Arch St., Philadelphia 7, Pa.

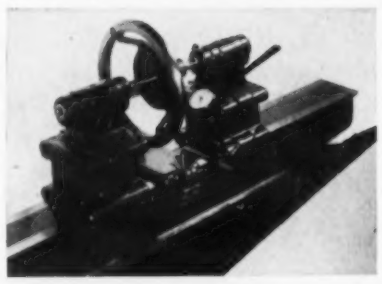
For more details circle NED-682 F4 on enclosed inquiry slip

STAPLING PLIER
with long pointed clinching blade

Corrugated containers can be efficiently closed with the P4-8P stapling plier which uses ¼, ⅜ and ½-in. staples. It is equipped with 4⅜-in. sharply pointed blade which, when inserted at edge of container, clinches the staple as the driving mechanism forces it through the top flap. Only a small slit is left when blade is withdrawn. Made by **Bostitch,** 1016 Mechanic St., Westerly, R. I.

For more details circle NED-683 F4 on enclosed inquiry slip

BENCH CENTERS
for inspecting cylindrical work



Designed for holding cylindrical work for inspection purposes, bench centers feature improved bed layout. Bed is of U cross-section, is heavily ribbed and has a three-point bearing. Headstock and footstock are individually adjustable and can be securely locked wherever required on the bed. Spring-actuated center can be locked in position for supporting heavy work. Headstock and footstock centers swing 8-in. diameter and take work up to 36-in. long. As in illustration, 4-in. raising blocks can also be furnished which increase swing to 16 in. Dial gages can be provided. Made by **Brown & Sharpe Mfg. Co.,** Dept. 43, Providence 1, R. I.

For more details circle NED-684 F4 on enclosed inquiry slip

MICROSCOPE ATTACHMENT
provides 12.8-mm working distance

Freedom of movement under the objective lens of any standard microscope is afforded by British - made attachment which provides 12.8 mm working distance. Device, made in 20X and 40X models, also erects the image viewed. Microscope can thus be employed in viewing some surface defects, viewing in crevices and indentations and viewing specimens at high temperature. In mounting, attachment replaces one of the objective lenses. A half-aluminized plate first passes light rays then, when they are reflected back to it by first surface mirror, reflect the rays correctly positioned for viewing. The 40X unit has 4-mm f/1, while 20X objective has f/1 of 8 mm. Distributed by **Edmund Scientific Corp.,** 180 E. Gloucester Pike, Barrington 3, N. J.

For more details circle NED-685 F4 on enclosed inquiry slip

Need a building? Or a series of them? Quickly, and at low cost?

Truscon SPEED-ERECT Steel Buildings can be arranged to fit exactly your requirements of design and budget. Truscon Steel Buildings are available in a wide range of standard designs. They are used for all kinds of industrial and commercial buildings because they offer fire protection, permanence, ease and speed of erection, low upkeep, low cost, high investment value. Truscon Steel Buildings have a high salvage value which permits them to be dismantled and re-erected in an entirely new location at modest expense.

Write and tell us your building requirements.

FREE BOOK—Plan your building needs with the aid of the fully illustrated, 24 page catalog giving full details on these Truscon Ready-Made Steel Buildings. Write for your free copy today.

TRUSCON STEEL DIVISION 1096 Albert St. Youngstown 1, Ohio
REPUBLIC STEEL CORPORATION

For more details circle NED-686 F4 on enclosed inquiry slip

SPECIALS may match the prices of STANDARDS

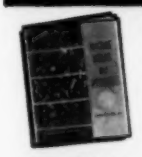
If ordered in fair quantities, recessed hex head screws cost no more than standard machine screws, and actually much less than trimmed hex head screws.

The saving results from elimination of one production operation, without loss of mechanical values. The difference is in appearance. And even that may be in favor of the recessed head.

To order only, made to standard dimensions in sizes to suit your needs or to your specifications.

Get our prices and deliveries on your requirements. In fact write us about special upset, and rolled thread products of any kind. The cost may be lower than you think.

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS



WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

For more details circle NED-687 F4 on enclosed inquiry slip

FOR PRECISION
Carbide Finishing
ELGIN DIAMOND IN DYMO-C
...Designed for Carbides!

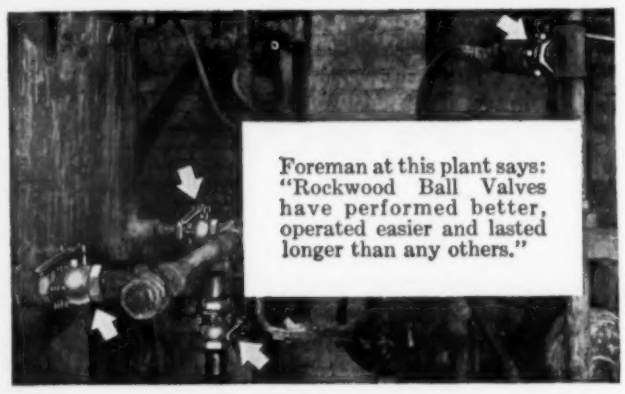
Where precision really counts, finishers specify ELGIN Diamond because they can be sure of:
- consistent accuracy—uniform cutting action
- flawless finishes every time, in less time

Actual field tests prove this new diamond abrasive up to 20% faster for finishing carbides.

Send for the DYMO-C bulletin today!

ABRASIVES DIVISION, Dept. 1
ELGIN NATIONAL WATCH COMPANY
ELGIN, ILLINOIS

For more details circle NED-688 F4 on enclosed inquiry slip



Do you need a
FULL-FLOW VALVE?

FULL-ROUND-FLOW in ceramics plants, where Rockwood Ball Valves, handling clay-and-water mixtures, protect product quality by preventing air bubbles caused by turbulence in conventional valves. What are *your* applications?

Other features — positive leakproof seating; quick opening and closing and extra wear-resistance. Tested and listed by Underwriters' Laboratories, Inc. Write for complete details. Rockwood Sprinkler Company, 506 Harlow Street, Worcester 5, Mass. Distributors in all principal cities

ROCKWOOD

ROCKWOOD FULL-FLOW BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

For more details circle NED-689 F4 on enclosed inquiry slip

NEW
Schrader Pressure Regulators
for fastest response, highest capacity

Maximum capacity with minimum pressure drop, plus almost immediate response to changing loads are features of the new Schrader Air Pressure Regulators.

These new models are light in weight—the body is die-cast aluminum—and will give long, trouble-free service, since all working parts are of corrosion-resisting materials. Available either with or without a self-bleed feature.

These new Schrader Regulators are available in five sizes: ¼, ⅜, ½, ¾ and 1 N.P.T., and can be installed for right-to-left or left-to-right flow. Gauge ports are provided on either side for easy readability in any position. Standard range is 5-150 psi.

For details on this new regulator, ask for Bulletin A-251.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue—Dept. E-45—Brooklyn 38, N. Y.

For more details circle NED-690 F4 on enclosed inquiry slip

SMALL TRANSFORMERS
meet or exceed NEMA standards

Small transformers are built to industrial specifications in sizes 2 va and larger and meet or exceed NEMA specifications. Especially suitable for control panels because of their compactness, they have precision-wound coils with a high dielectric insulation between winding layers. Polyvinyl insulated color-coded leads are used. All sizes are available either with slotted mounting feet or encased in channel type frames. Polymerizing type varnish impregnation is resistant to moisture and acids. Made by **Hevi Duty Electric Co.**, P. O. Box 563, Milwaukee 1, Wis.

For more details circle NED-691 F4 on enclosed inquiry slip

KEYSEATER
has automatic feed and relief

Keyways from 1/16 to 1 in. can be cut with maximum length of cut of 8½ in. on the 1-in. keyseater. Largest diameter cutter bar is 1¼ in. and distance from 1-in. cutter to column is 16¼ in. Machine features automatic feed and automatic relief which backs the work away from the cutter on the up stroke. Automatic centering locates the work quickly. Also incorporated are automatic stop which cuts off feed for any given depth; one-shot lubrication system; single-tooth cutters; and quick set-up with all control handles built into machine. Cutter bits are interchangeable and in most cases the cutter bar does not require changing to cut different size keyseats. Made by **D. C. Morrison Co.**, P. O. Box 1017-N, Cincinnati 1, O.

For more details circle NED-692 F4 on enclosed inquiry slip

Geared Turbine Generators

Worthington Corporation—24-page illustrated bulletin 1969 covers geared turbine generators for both alternating and direct current service ranging from 200 to 1500 kw output. Controls and accessories of the generators are described and their engineering and construction features are given. They are easily adapted to operate over various frequency ranges.

For more details circle NED-693 F4 on enclosed inquiry slip

COSTLY WORK BENCHES NEED NOT BE A "NECESSARY EVIL" Investigate

INDUSTRIAL LAMINATED WOOD TOP BENCHES . . . still your best bench buy!

Nowhere else can you find a bench of such outstanding quality — with so many exclusive patented features — *for so low a price!* No other bench is so right for you for so many working needs. INDUSTRIAL BENCHES *last longer*...because they *stand up better*...made STRONG to begin with.

30 sizes and styles. *Send for complete catalog and prices.*

No. 1909

RIGID....
LOWER PRICED
24" wide, 5 foot long, 33 inches high.
Full laminated wood top made of selected hard maple on edge, 1¾" thick. All sections joined true and glued. Reinforced with concealed bolts. Tops finished, sanded and shellacked. Absolutely no bolts or screws protrude or show above top surface of bench.

$58.85 K.D.F.
F.O.B. NEW BRITAIN
Drawer, extra $8.25

Distributor's inquiries invited

IMMEDIATE DELIVERY. ORDER TODAY!

INDUSTRIAL BENCH & EQUIPMENT MFG. CO., INC.
91 South Street • New Britain, Conn.
Benches — Steel, Maple Top, Welding • Machine Stands, Work Stands, Bench Legs, Tote Boxes.

For more details circle NED-694 F4 on enclosed inquiry slip

First in Nation-wide Service!

CALL YOUR LOCAL TOWMOTOR REPRESENTATIVE

An important part of TOWMOTOR policy is to spot service facilities *near* each TOWMOTOR user. For fast service and the name of your closest TOWMOTOR Sales and Service office, see the yellow pages of your local telephone directory. TOWMOTOR CORPORATION, Div. 2506, 1226 East 152nd Street, Cleveland 10, Ohio.

TOWMOTOR
THE ONE-MAN-GANG

FORK LIFT TRUCKS and TRACTORS
SINCE 1919

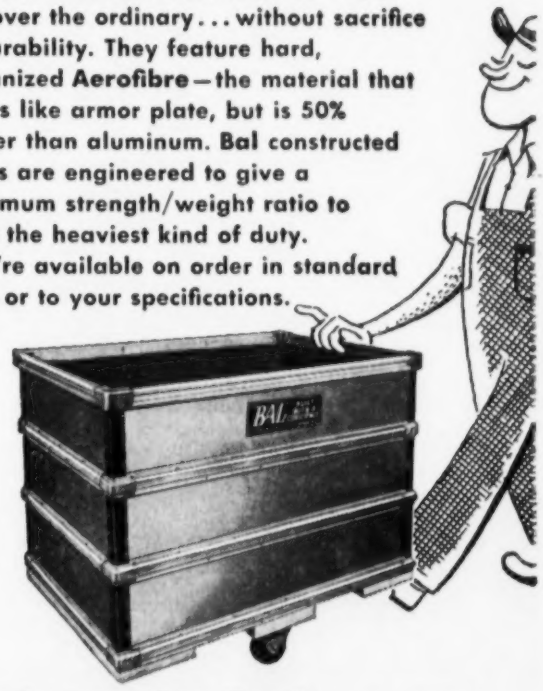
TOWMOTOR ENGINEERED FOR QUALITY PERFORMANCE

For more details circle NED-695 F4 on enclosed inquiry slip

355 TON-MILES SAVED BY ELIMINATING A NEEDLESS 50 LBS.*

Get more Live weight with BAL built trucks

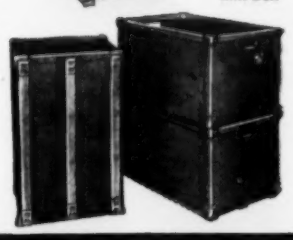
It costs you money to move materials. **Bal-built Samson Trucks save 50—150 lbs. over the ordinary...without sacrifice of durability. They feature hard, vulcanized Aerofibre—the material that wears like armor plate, but is 50% lighter than aluminum. Bal constructed trucks are engineered to give a maximum strength/weight ratio to meet the heaviest kind of duty. They're available on order in standard sizes or to your specifications.**



The Samson Box Truck—Hard, vulcanized **Aerofibre** reinforced with thick steel hardware and steel no-bulge body bands; compound top rail; solid oak bottom—indestructible as a tank yet rolls like a baby buggy. Also available in open, drop front, or shelf designs.

BAL Nesting Tote Box

Other Bal Built materials handling items of Aerofibre:
- Mill & Tote Boxes
- Roll-away Tote Boxes
- Shipping Boxes
- Barrels
- Bins
- Hampers



BAL No. 2 Mill Box

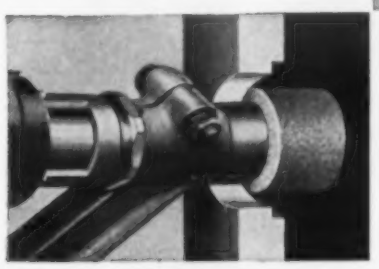
Write for complete catalog.

*What costs do you save? — Figure an average twenty-five 400-yard round trips per day for ten 250-day years: multiply by 50 lbs.

SINCE 1898 william BAL corporation 11 JOHNSON ST. NEWARK 5, N. J.

For more details circle NED-696 F4 on enclosed inquiry slip

For fast, accurate handhole seat refacing, use the...



ELLIOTT HANDHOLE SEAT GRINDER

You'll come up with sure-tight seats everytime when this handhole grinder is on the job. It's simple and easy to operate . . . set-up and grinding time amounts to just minutes. Insert the grinder in the handhole to be resurfaced, then clamp the base of the unit to an adjacent handhole. The grinding wheel is held on a vertical axis, and can move freely in that plane, and only in that plane. Guide rollers for a wide variety of seat widths are available from 3/16" to 21/32". The grinder may be driven by either an air or an electric motor. For details contact your local Elliott Field Engineer or write Elliott Company, Springfield, Ohio.

Y4-12

ELLIOTT Company

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS
CONDENSERS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

▲ For more details circle NED-697 F4 on enclosed inquiry slip ▲

4 WAYS TO CUT COSTS WITH GOOD SCISSORS and SNIPS

You can use with confidence these fine CLAUSS tools. Each meets a specific need in industrial cutting, is made to outlast average cutting tools. Over 100 other models — ask your CLAUSS distributor about them.

1. THREAD CLIP—No. TC4½

USED by Fabric Mills, Garment Makers, and Mfrs. of Electronics Equipment—for snipping loose threads and fine wire.

Hardened and tempered for longer life between sharpenings. Double-plated, chrome over nickel, with special stainless steel screw and lock nut to prevent rust from perspiration.

2. FILAMENT SNIP—No. 76½

USED by Mfrs. of Electronics Equipment and Small Parts Mfrs. —for cutting hard-to-reach filament, light wire, light metal.

Small, sturdy blades for close tolerance, yet with tremendous leverage. Special handles for hand protection.

3. WINDLACE SNIP—No. 928½

USED by Automotive and Aviation industries, for cutting weather stripping, beading, spring wire core, sponge rubber, fabric-covered insulation material.

Sharp, hard blades cut clean without nicking. Long, spring-action handles and short, stubby jaws deliver tremendous power.

4. INDUSTRIAL SNIP—No. 426B

USED by Automotive Industry, Mfrs. of molded rubber items, Poultry Processors, for cutting light metal, upholstery fabrics, in body work, trimming flash from rubber parts.

Long handles and light weight for easy handling and unusual leverage.

Clauss FINE CUTLERY SINCE 1877

CLAUSS CUTLERY COMPANY, Fremont, Ohio
New York Office—1107 Broadway

▲ For more details circle NED-698 F4 on enclosed inquiry slip ▲

The Spray Gun INDUSTRY PREFERS

Model P-JGA-502
$32.00
F. O. B. Toledo, Ohio

The DeVilbiss P-JGA spray gun is a high speed, large capacity, production-type gun of exceptionally compact design. Its light weight, comfortable balance and easy action minimize fatigue. Has extra-capacity to handle even the heaviest spraying requirements. Sprays any finishing material. Can be fitted with various nozzles to produce a wide variety of spray patterns for regular and special uses. Write for full details.

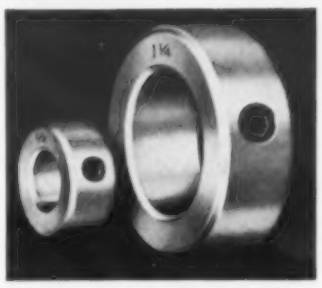
DeVILBISS

THE DeVILBISS COMPANY
Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England

▲ For more details circle NED-699 F4 on enclosed inquiry slip ▲

STEEL COLLARS
cadmium plated to facilitate welding



Precision-machined solid steel and stainless steel shaft collars are cadmium plated to facilitate welding when necessary. They are also equipped with hollow set screws, and have bore size stamped on the face. Forty - three standard sizes range in bore from ⅛ to 3 in., and special sizes are available to order. Made by **Rockwood Pulley Mfg. Co.**, Dept. A, 20 Crosby St., New York 13, N. Y.

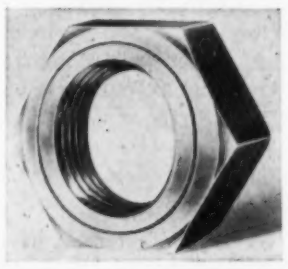
▲ For more details circle NED-700 F4 on enclosed inquiry slip ▲

ARC FURNACE CONTROL
uses continuous-running motors

A steady arc even under the most adverse conditions is maintained by this simplified arc furnace control which makes use of motors that run continuously and always in the same direction. The generator and reversing motors used in previous controls are eliminated in this new control, as are the secondary current transformers. "Stop" and "go" action is avoided. Control is offered as a completely integrated arc furnace regulator and electrode positioner. Made by **Whiting Corp.**, Hydro-Arc Furnace Div., S. Lathrop Ave., Harvey, Ill.

▲ For more details circle NED-701 F4 on enclosed inquiry slip ▲

MACHINE SCREW NUTS
self-locking, are reuseable



Completely self - locking, these machine screw nuts are double chamfered and countersunk and can be assembled either side up for automatic hopper assembly. They are made in one piece and are not affected by oil or water. Locking action is maintained after repeated use, and nuts will lock in any position on thread. Cold formed for uniformity and strength, nuts are available in steel, brass and aluminum in all machine screw sizes. Made by **Jacobson Mfg. Co.**, Dept. G, Kenilworth 9, N. J.

▲ For more details circle NED-702 F4 on enclosed inquiry slip ▲

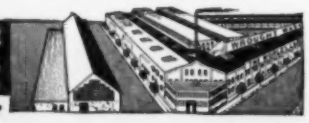
Geared to Industry's Production Demands Since 1887

MILWAUKEE WROT WASHERS

WASHERS STAMPINGS

Offering the most complete line of washers available today . . . all types and sizes, all materials, all finishes. More than 25,000 sets of dies. Let us quote on your requirements.

WROUGHT WASHER MANUFACTURING CO.
The World's Largest Producer of Washers
2256 S. BAY ST., MILWAUKEE 7, WIS.



A 7511-1/9

▲ For more details circle NED-703 F4 on enclosed inquiry slip ▲

Control Costs!
Print the Weight with New TOLEDOS

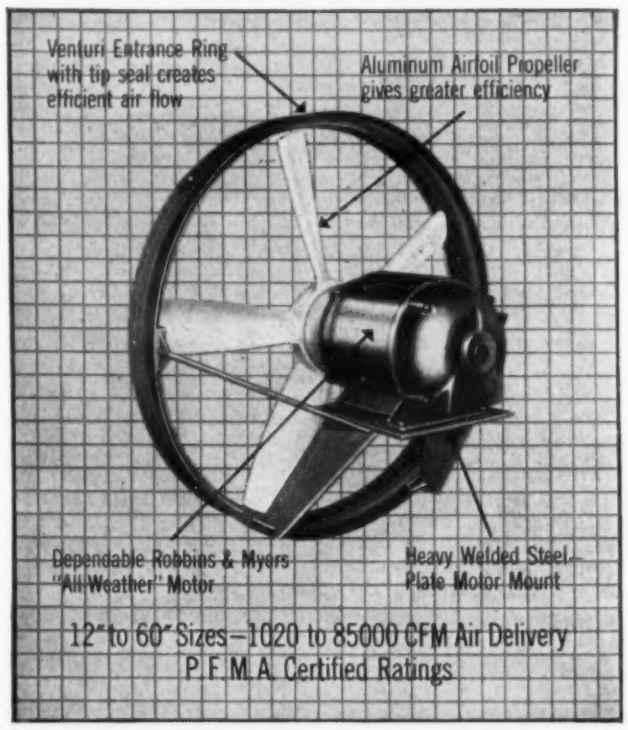
New Toledo Printweigh Scales meet your needs today for *closer cost control!* Stop human errors in reading, remembering, recording . . . provide accurately printed weights with split-second speed . . . *accurately* recorded!

Printweighs are available for dial type scales in the great new line of Industrial Toledos! *44 new features* include . . . new clean-line design . . . double-pendulum mechanism in one-piece sector . . . lifetime fulcrum. Send for new condensed catalog No. 2001. Toledo Scale Co., Toledo 1, Ohio.

TOLEDO.
Headquarters for Scales

▲ For more details circle NED-704 F4 on enclosed inquiry slip ▲

HEAVY-DUTY DEPENDABLE



PROPELLAIR® TYPE CD FANS

Use this versatile fan anywhere—for general duty ventilation in side-wall mountings or installed in Sky-Blast® roof ventilators or in hoods and ducts where high resistance is encountered. Modern Propellair Direct Connected Fans are ideal for removal of heat, dust, moisture, fumes, and smoke.

Single Name-plate Guarantee

Dependable Robbins & Myers motors in single phase or "All-Weather" polyphase designs give long, trouble-free service. Explosion-proof and glass insulated motors are also available. Propellair's single name-plate guarantee covers both fan and motor, and is backed by 22 years of research and engineering. Whatever your air moving problem may be, our engineers will be glad to make a survey and give you their recommendation. There's a rugged Propellair Fan for most applications.

Write for Bulletin 690-N

PROPELLAIR®
DIVISION OF ROBBINS & MYERS, INC.
SPRINGFIELD • OHIO

Man Cooler Sky-Blast Tubeaxial Vaneaxial Extended Shaft

▲ For more details circle NED-705 F4 on enclosed inquiry slip ▲

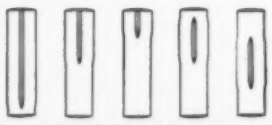
FASTEN, HINGE or PIN *with* DRIV-LOK PINS

FASTER ASSEMBLY... LOWER COSTS

POSITIVE ANCHORING ...won't come loose

DRIV-LOK Pins are responsible for great economies and product improvement in thousands of applications. For machinery, finished products, components and sub-assemblies, DRIV-LOK Pins offer definite advantages in time, labor and cost savings. We can help you better if you will write, giving us the nature of your problem. Catalog and Samples sent without obligation.

STANDARD TYPES a type for every need.



Type A Type B Type C Type D Type E
Also Types F and G

WRITE FOR CATALOG

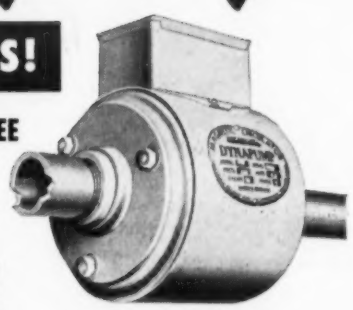
DRIV-LOK PIN COMPANY
717 Chauncy Street Sycamore, Illinois

For more details circle NED-706 F4 on enclosed inquiry slip

Give your product these

Dynapump

ADVANTAGES!



- MAINTENANCE FREE — No lubrication
- LEAKPROOF — No shaft seal or stuffing box
- EASILY INSTALLED — Compact, light, may be mounted in any position
- CORROSION FREE — Stainless steel
- LOW FIRST COST

Magnetic Fostoria Pumps

The revolutionary DYNAPUMP is a magnetically driven fractional horsepower centrifugal pump that eliminates 90% of pump difficulties. It is suitable for pumping water, solvents, refrigerants, corrosive or hazardous fluids, beverages, etc. Write for descriptive folder.

THE FOSTORIA PRESSED STEEL CORP., Dept. 608, Fostoria, O.
"Our 38th Year of Quality Products"
No. 5404

For more details circle NED-707 F4 on enclosed inquiry slip

BARBER COLMAN

Barcol®

Door Operators

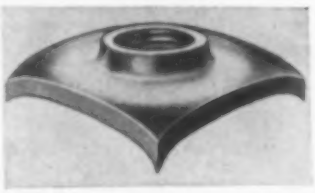
with timesaver pull switch

Always a timesaver, often a heat saver too! Pull switches on Barcol door operators keep traffic moving, keep costs down. Also available with radio control which truck operators can actuate while in motion. Barber-Colman also makes operators for swinging or sliding doors and sliding gates. Your Barcol distributor sells, installs, guarantees, and services—look under "Doors" in phone book.

BARBER-COLMAN COMPANY, DEPT. S46, ROCKFORD, ILLINOIS

For more details circle NED-708 F4 on enclosed inquiry slip

CONCAVE NUT is self-gripping and locking



Made of hardened and spring-tempered high carbon steel, the P-M nut is self-gripping and self-locking. Concave fastener has cut threads and a flange with turned-down corners that bite into the material to which it is applied. Spring flange is deflected during tightening so that tension applied to thread prevents loosening. Nut can be removed and reused, and is currently made in 6-32, 8-32, 10-24 and 10-32 sizes. Made by **Waterbury Pressed Metal Co.**, P-M Nut Div., Dept. 101, 300 Chase Ave., Waterbury, Conn.

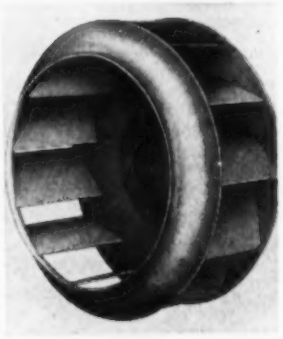
For more details circle NED-709 F4 on enclosed inquiry slip

CODING PEN uses colored indelible inks

Broad stripe of ink in any of 12 colors can be applied to paper, fiber and plastic tags used in coding for production control and parts identification by the Col-R-Coder marking pen. It uses Dri-flo indelible inks which will withstand water, steam, solvents, bleaches, alkalis and other solutions and temperatures found in industrial processing. Coding device is made of spun aluminum with screw-on cap and pocket clip. Ink is held in barrel and mark is made by wide felt tip. Made by **Dri-flo Mfg. Co.**, 644 E. Ten Mile Rd., Hazel Park, Mich.

For more details circle NED-710 F4 on enclosed inquiry slip

BACKWARD CURVE BLOWERS in diameters from 12½ to 36½ in.



Dynamically balanced wheels of units in line of backward curve blowers permit smooth and quiet entry, passage and exit of air. They have machine spun cones and nothing to obstruct the air flow. NAFM recommended sizes from 12½ to 36½ in. are made with a cast iron hub. Housings are available for outdoor installations. Blowers have self-limiting horsepower characteristics and motors are job matched and designed for these units. Made by **Peerless Electric Co.**, Fan & Blower Div., 1401 W. Market St., Warren, O.

For more details circle NED-711 F4 on enclosed inquiry slip

HOW TO SAVE MATERIAL AND LABOR IN PIPING LAYOUTS

Here is a special fabricating service designed to save time, material and labor in piping systems. By eliminating numerous flanged joints and combining several fittings into one integral unit, as illustrated, Naylor fabrications provide the answer for greater efficiency and economy.

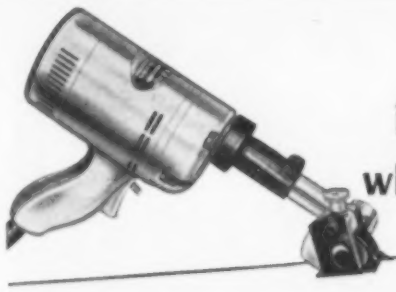
All types of materials can be fabricated accurately to your specifications. Sizes range from 3" to 44" in diameter and wall thicknesses up to ⅜".

Naylor Bulletin No. 525 presents helpful information on this special service. Write for your copy today and submit your problem for recommendation and quotation.

NAYLOR PIPE

Naylor Pipe Company • 1247 East 92nd St., Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office 350 Madison Ave., New York 17, N.Y.

For more details circle NED-712 F4 on enclosed inquiry slip



the cut is finished when you're finished cutting

Save time and money with a KETT Panel Cutting Saw. Just saw and job's finished. KETT Saw leaves smooth, milled edge that needs no finishing. Specially designed lead guide makes contour sawing quick and easy too. Start anywhere without drilling. Cut to any desired depth through most any kind of sheet material . . . mild steel up to 12 gauge, aluminum to 3/16", soft rigid materials up to ½". Your electric or pneumatic drill motor can power the KETT Saw. Write for Catalog E-16.

KETT PANEL CUTTING SAW

....no drilling!
...no sanding!
...no filing!
...no deburring!

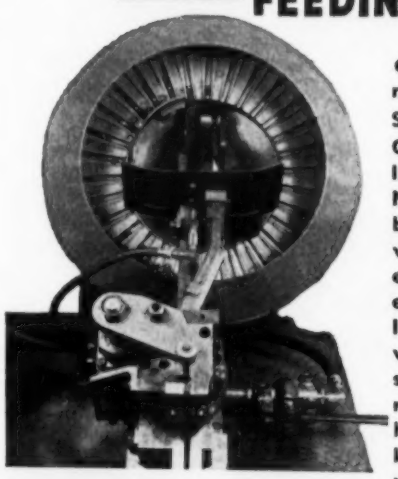
THE KETT TOOL COMPANY • 5 East Third St., Cincinnati 2, Ohio

For more details circle NED-713 F4 on enclosed inquiry slip

Get on the Right "TRACK" with your SMALL PARTS!

DISCARD SLOW MANUAL FEEDING!

Use DPS SELECTIVE FEEDING DEVICES



● Note the improvement in Lower Costs, Speedy Production, Quality Control and Increased Profits . . . Now this DPS contribution to the metal-working industry is emphasized in an expanded line of selective feeding devices and engineering service . . . Tell us your requirements; we have the unit and the know-how to meet your needs.

DPS BARREL-FEEDER

● Above is an interesting case showing separate screws and lock washers that were loaded into a single feeder and ejected loosely assembled at the rate of 60 to 70 a minute . . . An amazing speed increase over slow, manual operation. In this instance, as in thousands of other applications, the unit was designed with the idea of maximum feeding of a wide variety of parts at a fraction of the cost of manual feeding.

DPS BOWL-FEEDER

Our Newest Addition

● An electric, vibrating unit that advances the parts on a circular spiral, aligning and correctly locating them to issue directly into the work area in proper time cycle. Provides fully automatic feeding of light, fragile parts that normally could not withstand tumbling.

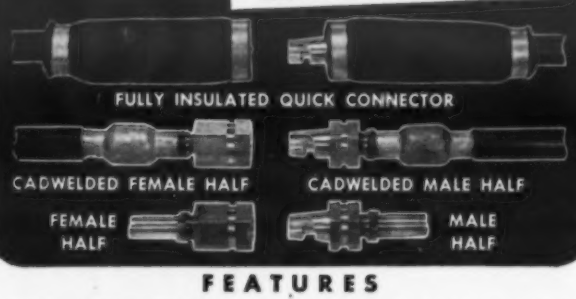
Let us diagnose your symptoms and prescribe the proper remedy. Write for details.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

For more details circle NED-714 F4 on enclosed inquiry slip

CADDY
TAPER-LOK QUICK CONNECTOR

a positive locking connector featuring the Cadweld connection—plus durable rubber insulators anchored to the welding cable.



FEATURES

1. **CADWELDED CONNECTIONS**
   1. Permanent connection
   2. High Conductivity
   3. Cool Operation
2. **Positive wedging action**
   1. Greater current capacity due to high pressure contact between connector surfaces.
3. **Positive locking action**
   1. Cannot pull apart in service
   2. Easily disconnected
4. **Durable rubber insulation**
   1. Not damaged by impact
   2. No possibility of arcing
   3. Any size welding cable can be used
5. **Insulation Punch-Lok banding method**
   1. Prevents cable insulation "creeping" and pulling out of connector insulation
   2. Prevents flexing at the connection
6. **Female end (hot line) protection**
   1. Prevents arcing when male is disconnected
7. **500 Amp. Capacity**
   1. Suitable for all type operating conditions
8. **Able to withstand vertical or horizontal pull**
   Punch-Lok hose banded grip on cable insulation and quick connector halves
9. **Replaceable stud**
   Saves money when replacing old or broken cable

CADDY ARC WELDING ACCESSORY DIV.
ERICO PRODUCTS, Inc.
2070 E. 61st PLACE
CLEVELAND 3, OHIO

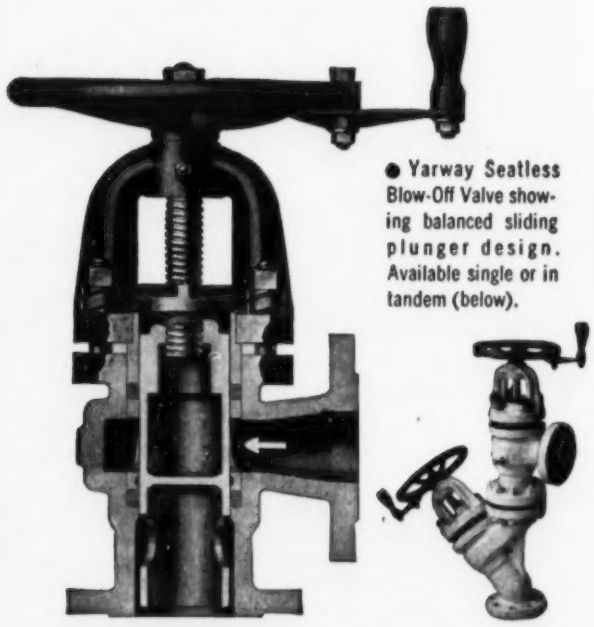
▲ For more details circle **NED-715 F4** on enclosed inquiry slip ▲

KEEPS BOILER BLOW-DOWN LINES *DROP TIGHT*

Yarway Seatless Blow-Off Valves keep blow-down lines *drop tight* because *there is no seat to score, wear, clog or leak.*

The well-known balanced sliding plunger design—combined with the newest metallurgical developments—make Yarway Seatless Blow-Off Valves rate top efficiency for low and medium pressure boiler plants.

Among high pressure plants, Yarway Unit Tandem Valves are used by more than 4 out of 5.



● Yarway Seatless Blow-Off Valve showing balanced sliding plunger design. Available single or in tandem (below).

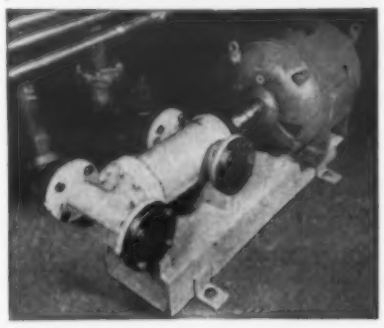
If you operate a boiler, be sure to send for the Yarway Blow-Off Valve Books—
Bulletin B-426 for pressures to 400 psi or
Bulletin B-433 for higher pressures to 2500 psi. Write . . .

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY blow-off valves

▲ For more details circle **NED-716 F4** on enclosed inquiry slip ▲

COLLOIDAL MILL for industries using emulsions



In industries using emulsions, this disk disperser or colloidal mill makes possible use of inexpensive raw materials, provides a smooth product, eliminates off-grade batches and allows use of light kettles for making heavier products. Knives revolve at high speed between perforated plates to shear material to fine consistency. With greases, disperser cuts long fibers and stabilizes the grease without over-working. Hard greases can be formulated because mill breaks up lumps, making it possible to screen out minute particles. Self-contained unit is driven by 15-hp, 1800-rpm motor. Made by **Cazenovia Precision Machine Co.**, Dept. NED, 667 Oakwood Ave., East Aurora, N. Y.

▲ For more details circle **NED-717 F4** on enclosed inquiry slip ▲

FLEXIBLE COUPLING allows 7-degree misalignment

Rated torque of 200 lb-in. with 7-degree angular misalignment can be transmitted in uninterrupted service by this flexible coupling designed for locomotive auxiliary generator drive. (*Note: The description of this coupling, NED—701 D4, Apr. '54, was incorrectly illustrated. .The proper picture is now shown.*) Torsional, axial, radial and angular motions are accommodated by bonded rubber members. Elastomer is securely bonded to steel inner member of individual joints. Arrangement of elements in series allows soft torsional spring rate to provide isolation of torsional vibration. Length of coupling can be changed to afford required parallel misalignment for efficient use of available space. Made by **Lord Mfg. Co.**, Dept. F, 1635 W. Twelfth St., Erie, Pa.

▲ For more details circle **NED-718 F4** on enclosed inquiry slip ▲

Metalworking Tools

Rockwell Mfg. Co., Delta Power Tool Div.—Condensed specifications folder catalogs principal Delta tools for metalworking industry. These include drill presses, cut-off machines, band saws, abrasive disk and belt finishing machines, wheel and belt grinders, shapers and welders. Accessories such as surface plates and bench centers are also included. Opened folder can be used as wall chart.

▲ For more details circle **NED-719 F4** on enclosed inquiry slip ▲

May We Serve You?

You will find our experience in WHEEL IMPROVEMENT a treasure store for you in your search for MOBILITY at its BEST. We offer you—

DESIGN of WHEELS and HUBS
DESIGN of SPINDLES and AXLES
SELECTION of Adequate BEARINGS
SELECTION of Suitable Closure SEALS
SELECTION of Sizes, Types, Rubber TIRES

—in ONE Engineered Package

Our PACKAGE PLAN can save you Research, Development, Tooling Costs. We Invite Your Inquiries.

INTEGRATED ENGINEERING — WHEEL BUILDERS for AGRICULTURE & INDUSTRY — Since 1888

FRENCH & HECHT DIVISION
KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA

▲ For more details circle **NED-720 F4** on enclosed inquiry slip ▲

INDIVIDUAL VULCANAIRE DUST COLLECTING UNITS

Are used on surface and other grinders where grinding dust must be removed.

Inexpensive, compact units, with no moving parts. Operated from your present air supply.

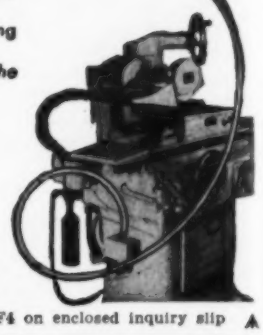
Installed in a few minutes, eliminating need for costly centrally located dust collecting systems.

The collector element is mounted on the side of the machine. Quickly cleaned, requiring no refills.

Vac-suction pick-up device (vacuum nozzle) is mounted on the grinding wheel guard or close to grinding wheel on other applications. This mounting permits constant contact with dust as the wheel is moved up or down.

A simple needle valve operates the unit, and can be shut off whenever the machine is not in use.
Available in 700 series for grinding wheels 7" dia. or less.
Made by the makers of Vulcanaire *The* jig grinding attachment.

Write on your letterhead for "Dust Collector" Booklet.



VULCAN TOOL CO.
737 Lorain Dayton 10, Ohio

▲ For more details circle **NED-721 F4** on enclosed inquiry slip ▲

PneuBin saved $24,000.00 per year on a total investment of $1460!

Savings on time, labor and uninterrupted production flow amounts to $2,000.00 per month for one PneuBin customer.

Here's the proof that PneuBin can save money for its users. By eliminating material stoppages in bins and hoppers, this PneuBin installation is piling up huge savings for its owner. Read this excerpt from a letter* received by the general sales manager at PneuBin:

" . . . we wish to advise you that we have benefited by the installation of the PneuBin, not only through savings in labor and material, but more important by uninterrupted production, for which we estimate at a total of $2,000.00 monthly savings
In view of the excellent results, we have recommended the PneuBin to our Central Engineering Department for installation wherever similar difficulties are encountered."

*Complete letter on request.

How would you like to have an annual return of 1643% on a $1460 investment?

Take a tip from this company who has solved its flow stoppage problems with PneuBin. Let a PneuBin engineer show you how your company can effect big savings by decreasing your material flow problems.

PneuBin is designed to alleviate flow stoppage problems in your bins through the principle of "positive displacement." PneuBin moves the bin contents . . . not the bin. PneuBin neoprene panels, mounted on the inside walls of the bin, operating off the plant air supply, will eliminate rat holing, bridging, caking or high-viscosity hang-up.

Send for FREE literature and "Flow Stoppage Report." PneuBin engineers will make recommendations with no obligation on your part.

PneuBin is a product of **GEROTOR MAY CORPORATION** Baltimore 3, Md.
Manufacturers of Gerotor Hydraulic Pumps and Motors.

▲ For more details circle **NED-722 F4** on enclosed inquiry slip ▲

NOW! CUT YOUR CURRENT COSTS... BOOST LAMP LIFE, WITH

LUSTRA GOLD-TONE FLUORESCENT STARTERS

YOU'LL MAKE BIG SAVINGS in the maintenance and operation of your fluorescent installations . . . with Lustra Gold-Tone Starters. These positive-action starters instantly cut out any lamp that begins to flicker or fail . . . prevent burn-outs . . . save wasted power.

Lustra Gold-Tone Fluorescent Starters come in Push-button Reset and Automatic Reset types—both guaranteed for two years of burning service. They are ideal companions for **Lustra Double Duty Fluorescent Lamps** which are famous for their better diffusion, color constancy, and *maintained* high light output . . . Write for full information. **Lustra Corporation, Dept. R-6, 36 Washington Street, Brooklyn 1, N. Y.**

Lustra
AMERICA'S DATED LAMPS

DOUBLE DUTY REFLECTOR LAMPS, INCANDESCENT LAMPS, FLUORESCENT TUBES, SPOTLITES AND FLOODLITES, RUGGED DUTY LAMPS, FLUORESCENT FIXTURES AND STARTERS

▲ For more details circle **NED-723 F4** on enclosed inquiry slip ▲

USE THE Nissen METAL MARKER

TO MAKE ENDURING MARKS ON METAL, WOOD, GLASS, PLASTIC-Smooth OR ROUGH SURFACES

The Nissen Metal Marker is a handy, easy-to-use, ball point writing tube. The special, fast drying ink in the 6" x 1" tube withstands heat and weathering and will not chip, fade, peel or rub off in general use.

$1.00 per tube

Available in seven standard colors.

JOHN P. NISSEN, JR., CO.
manufacturers
GLENSIDE, PA.

▲ For more details circle NED-724 F4 on enclosed inquiry slip ▲

CALCULAGRAPH

keep tabs on costs

-with ACCURATE job time records

CALCULAGRAPH

figures elapsed time accurately

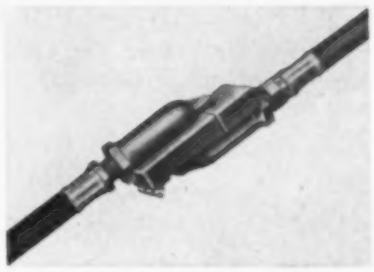
Reliable job time records are essential for compiling correct cost data, estimating reorders and checking on production efficiency. One sure way to secure accurate to the minute, dependable time costs is to use Calculagraph automatically-figured elapsed time records. Calculagraph gives you total elapsed time, starting and finishing time and date on a permanent, printed reference card. Eliminate losses due to inaccurate job time calculations by using Calculagraph to time your operations.

Write for full information today, to Dept. 302

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

▲ For more details circle NED-725 F4 on enclosed inquiry slip ▲

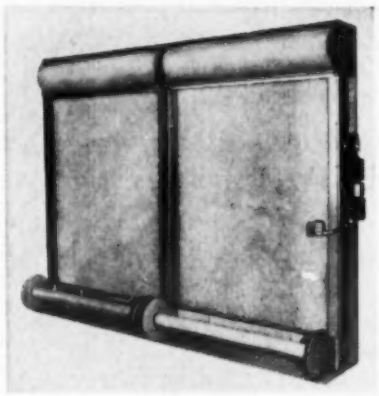
HOSE COUPLER is self-sealing on break-away



To couple this Hydra-Seal quick-connect hose coupler, the two parts are merely hooked on and pushed together; to uncouple, they are pulled apart. Coupler features unrestricted flow when connected and is self-sealing on break-away. It can be used on hydraulic, steam, gas, vacuum, air, cooling, water, lubrication, irrigation or material handling lines. Coupler is die cast of high strength corrosion-resistant aluminum alloy and is treated to provide wear-resistant surfaces. It is presently offered in ⅜-in. size and will be available in ½-in. Made by **Char-Lynn Co.**, Dept. NED, 2855 26th Ave. S., Minneapolis 16, Minn.

▲ For more details circle NED-726 F4 on enclosed inquiry slip ▲

AIR FILTER is self-cleaning



Glass fiber filtering media is used in the Roll-O-Matic automatic self-cleaning air filter for use in industrial ventilating and air conditioning systems. Filtering media in rolls of about 70 ft at the top of the unit is transported on a continuous screen for rerolling at the bottom. Pressure switch, sensitive to resistance differential across the filter curtain, actuates a drive motor that rotates the screen. Single roll should last 1 year per 10,000 cfm of filter capacity. Glass fiber is sprayed with nonflammable Viscosine that will not drip at temperatures up to 150° F. Filter is made in vertical sections 3, 4 and 5-ft wide and in heights from 5 to 15 ft in 4-in. increments. Made by **American Air Filter Co.**, 391 Central Ave., Louisville 8, Ky.

▲ For more details circle NED-727 F4 on enclosed inquiry slip ▲

Air Cylinders

Petch Mfg. Co.—12-page illustrated catalog contains engineering data on heavy duty air cylinders in sizes ranging from 1½ to 6-in. bore. Designed for incorporation in automatic machinery, cylinders are available in a variety of interchangeable mounting styles, including clevis, foot, flange and trunnion plates.

▲ For more details circle NED-728 F4 on enclosed inquiry slip ▲

NEW DEVELOPMENTS IN AMERICAN DECAL

NAME PLATES AND PRODUCT MARKING

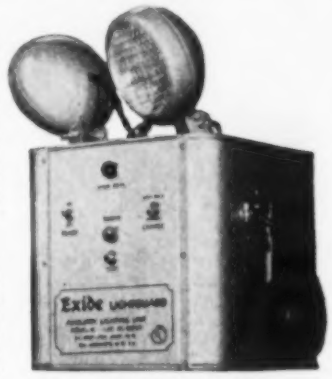
Whatever the surface or the use, American Decal offers a more durable dependable decal product marking. State your problem—we will send you complete information and samples. No obligation.

American Decalcomania Co.
4344 W. 5th Ave., Dept. R, Chicago 24, Ill.
New York • Cleveland • Windsor, Ont., Canada

▲ For more details circle NED-729 F4 on enclosed inquiry slip ▲

WHEN LIGHTS GO OUT EXIDE® LIGHTGUARDS® GO ON INSTANTLY...AUTOMATICALLY!

Wherever people gather, there's a vital need for Exide Lightguard protection. Some industrial plants use as many as 200! Here are spots where you now need Lightguard emergency lighting protection: *Corridors, aisles, cafeterias, lobbies, boiler rooms, engine rooms, switchboard rooms, loading platforms, exits, firetowers.*



NEW MODEL M

With the new Model M you get instant adequate lighting whenever normal lighting is interrupted—no matter what the reason. The Model M has a two-rate charger—high rate or trickle. After the emergency, automatic controls recharge the Exide battery specially designed for long life, easy maintenance, dependable operation. UL-approved, can be plugged into any 115 volt outlet—each lamp illuminates up to 10,000 square feet.

WRITE for interesting folder with facts on why Exide Lightguards guarantee more protection for every dollar you invest in such equipment.

Exide INDUSTRIAL DIVISION
The Electric Storage Battery Co., Philadelphia 2, Pa.

▲ For more details circle NED-730 F4 on enclosed inquiry slip ▲

production flows smoothly...

at top speed, at all times, yet free of rejects

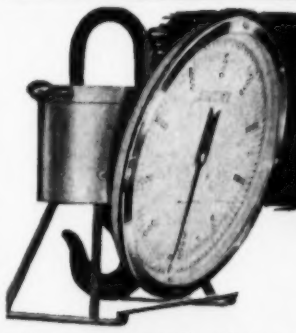
Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

KESTER SOLDERING FLUX

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, N. J. • Brantford, Canada

KESTER SOLDER

▲ For more details circle NED-731 F4 on enclosed inquiry slip ▲



$200 price reduction

ON EMERY CS-10 CRANE SCALE

Increased production makes a new low price on the Emery CS-10 Crane Scale . . . the best in its field . . . now only $995.

The Emery CS-10 Crane Scale provides . . .

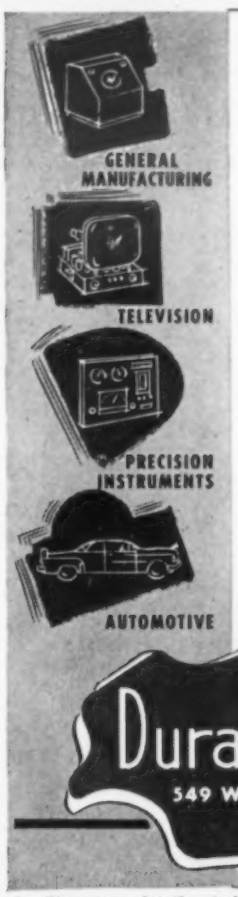
- ✔ weighing up to 10,000 lbs. *in transit.*
- ✔ only 19⅛ in. headroom required.
- ✔ guaranteed accuracy ±0.2%.
- ✔ no knife edges, no sticky seals, no wear.
- ✔ rugged industrial-type construction.
- ✔ big 21½ in. unbreakable dial for easy reading.

Order your Emery CS-10 Crane Scale at the new low price. Send for information today.

THE A. H. EMERY CO. NEW CANAAN 6 CONNECTICUT

Please send me descriptive bulletin No. 541.
NAME _____
POSITION _____
Attach to, or write on, your company letterhead.

▲ For more details circle NED-732 F4 on enclosed inquiry slip ▲



YOUR BEST SOURCE FOR

Fabricated

SPONGE RUBBER

We Have . . .

- The largest assortment of fabricated sponge rubber in the midwest . . . all thicknesses . . . all densities.
- Facilities for die cutting — slitting — punching.

In Addition . . .

We are specialists in applying pressure sensitive and dry-back adhesives of varying strengths to suit your needs.

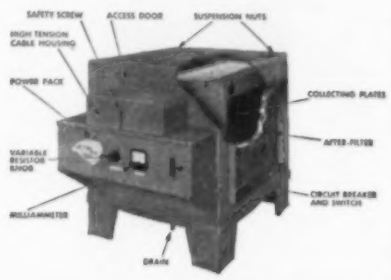
INCREASES OUTPUT
SAVES LABOR

Durable RUBBER PRODUCTS CO.
549 West Fulton, Chicago 6, Ill.

For more details circle NED-733 F4 on enclosed inquiry slip

ELECTRONIC AIR CLEANERS
capacities are 800 to 2400 cfm for industrial ventilation systems

Electronic air cleaners for use in ventilation, air conditioning or hot air industrial systems are available in three vertical flow and three horizontal flow models with capacities ranging from 800 to 2400 cfm at 90 per cent efficiency. Intake air is passed through an electrical field where dust is given a positive charge. Charged dust then passes over collecting plates to which it adheres. Collected dust is periodically washed away by sprayed water to a drain connection.

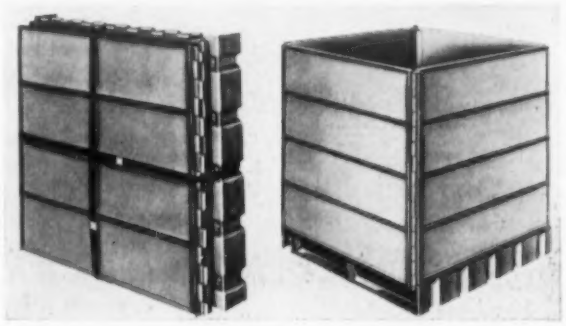


Dry-type after-filter prevents water spray from entering duct work and creates a small amount of back-pressure to insure thorough separation. Units have better than 99 per cent filtration efficiency by standard "Weight Method" tests. They require 110 v ac power supply with wattage consumption ranging from 30 to 60 dependent upon capacity. Made by **Electro-air Cleaner Co.,** 1284 Reedsdale St., Pittsburgh 33, Pa.

For more details circle NED-736 F4 on enclosed inquiry slip

COLLAPSIBLE SHIPPING BOX
of lightweight steel construction

Lightweight collapsible steel box and skid unit for shipping or materials handling has a hinged construction permitting assembly by one man in less than a minute. Assembled inside dimensions are 30 x 30 x 30 in. and pallet has 3½-in. clearance. Container weighs approximately 100 lb and is constructed of 18-gage steel with 16-gage reinforcement. Unit is collapsed by pulling two hinge pins and folding its sides. It then measures 31½-in. long x 31½-in. wide x 9 in. high, minimizing space required for return shipments. Feature of the assembled container is four-way nesting which prevents sliding. Made by **Republic Steel Corp.,** Pressed Steel Div., 6206 Truscon Ave., Cleveland 27, O.



For more details circle NED-737 F4 on enclosed inquiry slip

DEEP HOLE BORING

SAVE PRODUCTION TIME with our PROMPT ACCURATE SERVICE!

- GUN DRILLING - Lengths to 15 Ft.
- HOLLOW BORE - ¼" to 11" Diameter
- HOLLOW BORED FORGINGS - Up to 3000 lbs.
- HOLLOW BAR STOCK - To Specifications
- PRECISION HONING - 8 Micro-inch

Wire or Write . . .

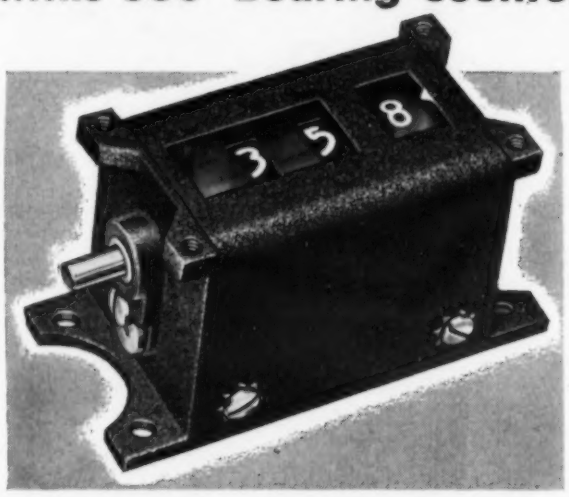
HOLLOW BORING CORPORATION
85 Prescott Street
WORCESTER, MASS.

For more details circle NED-739 F4 on enclosed inquiry slip

★ ★ ★ ★ ★

IT'S NEW...IT'S NEWS!

...this 360° Bearing Counter



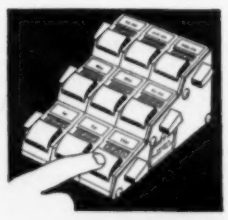
Smaller and more compact than ever, this new 360° Bearing Counter gives users several *bonus* advantages: It can be either base-mounted, or face-mounted flush with a panel surface. It will run at 1500 rpm constant speed or 2500 rpm on intermittent service . . . and it comes equipped with Geneva Transfer.

Added Evidence that —

Everyone Can Count on
VEEDER-ROOT

This is another Veeder-Root "first" . . . the latest of one of hundreds of standard and special Veeder-Root Counters for every mechanical and electrical application. What do *you* want to count?

ANOTHER NEW VEEDER-ROOT "FIRST"
New *Vary-Tally* Multiple-Unit Reset Counter gives you quick finger-tip count of anything countable. Comes in any combination up to 6 banks high, and 12 units wide (minimum of 2 units wide). Write for news sheet and prices.



VEEDER-ROOT INCORPORATED
HARTFORD 2, CONNECTICUT
Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

"The Name that Counts"

For more details circle NED-740 F4 on enclosed inquiry slip

HEAR HERE

NEW Model 45 Acousti-Booth — spacesaving configuration provides amazing acoustical performance.

50% Reduction in loudness of noise — 14 db attenuation — provides full-length Booth performance.

New triangular configuration permits 7 spacesaving multiple Booth arrangements.

All steel, doorless construction — silver gray hammered finish — easy installation — no maintenance.

WRITE for Bulletin A-131 for details, including auxiliary floor stand, light fixture, and brackets.

ORDER TODAY
ONLY $100.00
F. O. B. CHICAGO
light fixture extra

MODEL 45
35½" wide—32" deep—36" high.

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway
Chicago 31, Illinois

For more details circle NED-734 F4 on enclosed inquiry slip

standardize on standard

HALLOWELL® CABINET BENCHES

Finest all-steel construction, smooth, rigid working surfaces, free-sliding, carefully fitted doors, and smooth-gliding drawers make them outstanding. Functional design blends with any industrial interior. Standard accessories permit you to custom build them to your requirements. Stocked by industrial distributors. Write for literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

HALLOWELL SHOP EQUIPMENT DIVISION sps
JENKINTOWN PENNSYLVANIA

For more details circle NED-735 F4 on enclosed inquiry slip

Widely Adaptable!

NOPAK
Model V, 3- and 4-Way

Pilot Operated Slide Valves

Pilot Pressure or Bleeder Operated . . . these unique air valves permit an infinite variety of cycling in the direct or remote control of continuous or intermittent cylinder action. They may be energized by means of 2-way hand, cam or foot poppet valves; solenoid pilot or bleeder valves. Light weight, all-aluminum construction, simple design and small size make them adaptable to many uses which other valves cannot fulfill.

Write for Illustrated Bulletin "V"

GALLAND-HENNING NOPAK DIVISION
2755 S. 31st Street • Milwaukee 46, Wisconsin

Write for NOPAK Bulletin "V"

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 7579-1/9

For more details circle NED-738 F4 on enclosed inquiry slip

NEW Tinnerman Push-On Speed Nuts®

Available Now ...at a NEW LOW COST!

Start by hand...

Zip down on Studs!

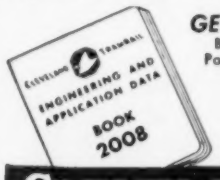
A newly created line of standard Spring Steel Push-On type SPEED NUTS now available at an average price reduction of 25%! This is made possible by large volume, high-speed production. Tinnerman, originators of Push-On type SPEED NUTS, has developed the C12000 Series to fit all popular stud sizes, round, D-shaped, and rectangular. They meet most application requirements... are available in rust-resistant finish. For full cost-saving details on these new low-cost SPEED NUT brand fasteners, see your Tinnerman representative, or write direct to:

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

▲ For more details circle **NED-741 F4** on enclosed inquiry slip ▲

TRAMRAIL BRIDGES INCREASE TONNAGE OUTPUT 100%

A steel fabricator replaced an I-beam crane system with modern Cleveland Tramrail equipment and thereby doubled his tonnage output. This is a typical story, because regardless of size or type, most Cleveland Tramrail installations pay for themselves within a few months.



GET THIS BOOK!
BOOK No. 2008
Packed with valuable information

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6639 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle **NED-742 F4** on enclosed inquiry slip ▲

The best "soft" hammer your money can buy!

JAW-HEAD

Tough, resilient water buffalo faces deliver plenty of power with full protection for delicate parts and finishes. Faces are easily replaced, and comfortable Safety-Flare handle gives you non-slip grip. Work goes better with a C/R RAWHIDE Jaw-Head. See for yourself.

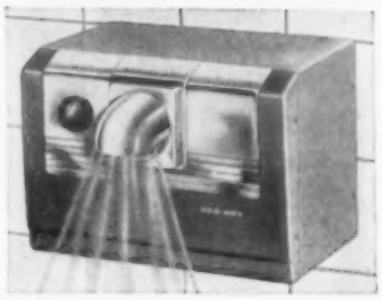
Available from leading industrial suppliers. Also C/R Rawhide mallets and Rawhide mauls. For further information write Dept. 22

CHANGE FACES IN SECONDS

CHICAGO Rawhide MFG. CO.
1301 Elston Avenue Chicago 22, Illinois
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

▲ For more details circle **NED-743 F4** on enclosed inquiry slip ▲

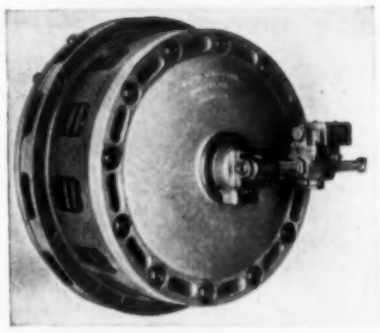
ELECTRIC DRYER for face and hands



Equipped with a Westinghouse Odor-out Sterilamp, the Ozo-Dry Hurricane electric face and hand dryer provides simultaneous drying and sterilizing. Indirect ultraviolet irradiation generated by this lamp is said to prevent the spread of surface bacteria and check skin irritations caused by manufacturing operations. Dryer has a 2000-w heating unit that is fuse-protected and a 6000-rpm blower which makes possible drying speed under 30 seconds. Pushbutton timer and swivel nozzle are other features. Made by **Michael Electric Co.,** 15 Stiles St., New Haven, Conn.

▲ For more details circle **NED-744 F4** on enclosed inquiry slip ▲

AIR-OPERATED CLUTCHES for rapid cycling and stopping uses



Designed for use on machines where fast cycling and accurate stopping are required, LK (low kinetic energy) air-operated clutches are available in 18 sizes covering maximum working torques from 3300 to 430,000 lb-ft. Low power losses in starting and stopping result from low inertia of driven parts. Built-in rotary seal and flow control valve give fast clutch release and gradual smooth engagement. Optionally available parts permit clutches to be converted to air-set spring-released brakes or to spring-set brakes as required. Simple construction permits replacement of worn friction disks by removing air cylinder assembly only. Made by **Industrial Clutch Corp.,** 521 Frederick St., Waukesha, Wis.

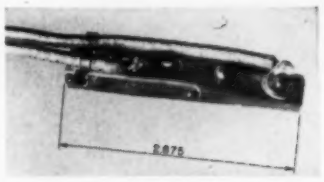
▲ For more details circle **NED-745 F4** on enclosed inquiry slip ▲

MOTORIZED PUSHER-PULLER for crated, skidded, wheeled loads

Pushing or pulling of crated, skidded or wheeled loads by means of traction applied to the powered front wheels is possible with the Tug - Bar electric motor - operated handling unit. Load is moved by leverage applied to the handle and the resultant weight on standard or elevated lip, or accessory attachment for moving uncrated objects. Not a lift, the Tug-Bar is available with 110-v ac 60 cycle motor or 24-28 v dc motor. Direction is chosen by controls in the handle. Loads up to 4000 lb can be moved wherever there is room for a man to stand by the 110-lb unit. Made by **Western Gear Works,** P. O. Box 182, Lynwood, Calif.

▲ For more details circle **NED-746 F4** on enclosed inquiry slip ▲

STRUCTURE OVERHEAT SWITCH signals when overheating occurs

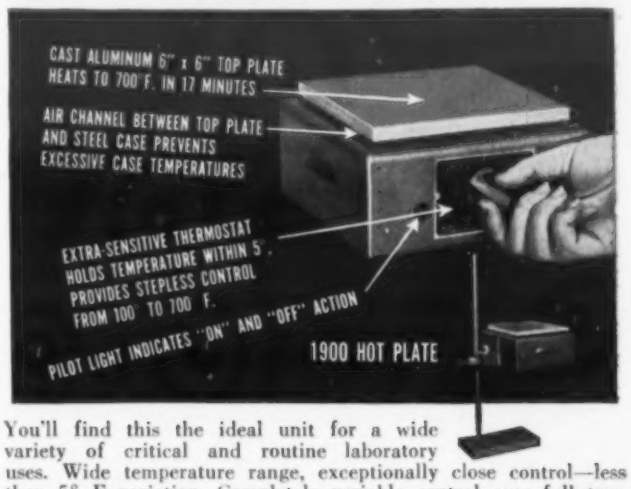


Actuated by heat from the surface to which it is attached, this structure overheat switch is designed to signal surface temperatures ranging up to 1750° F. It can be arranged to close a circuit when temperature reaches allowable maximum. A stainless steel calibration screw is fitted, contacts are platinum-iridium and insulation is mica. Switch mounts directly against the surface to be indicated and is unaffected by vibration. Dimensions of illustrated model are 2⅞-in. long, 9/16-in. wide and ⅝-in. high. Weight without leads is under 1 oz. Made by **Anthony Mfg. Co.,** Dept. N, 407-409 Main St., East Orange, N. J.

▲ For more details circle **NED-747 F4** on enclosed inquiry slip ▲

VERSATILE, HANDY HOT PLATE

for both exacting requirements and general heating in Laboratories and Plants

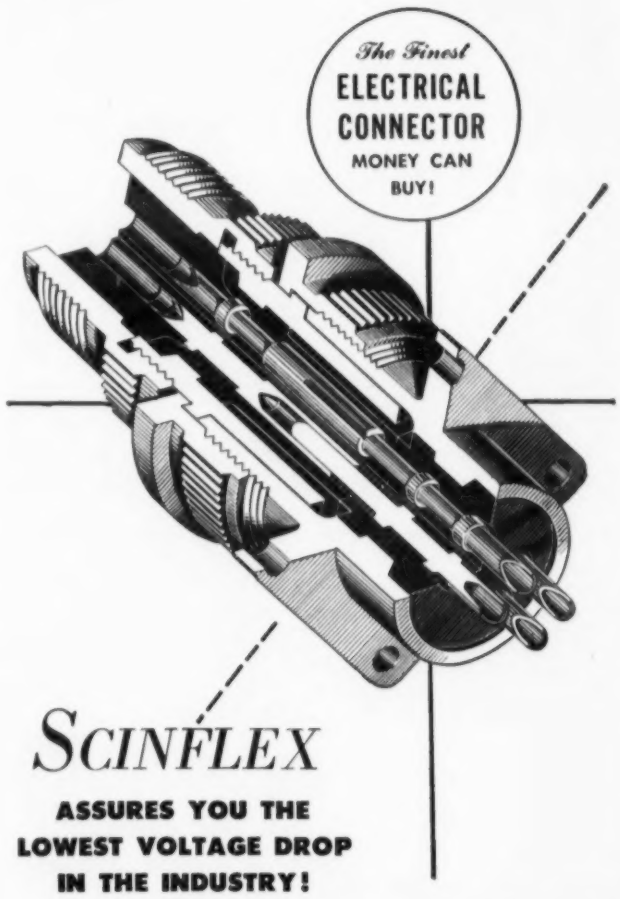


You'll find this the ideal unit for a wide variety of critical and routine laboratory uses. Wide temperature range, exceptionally close control—less than 5° F variation. Completely variable control over full temperature range. Compact, convenient — plugs into 110 V., 50/60 Cy. Only $19.75. Write for literature and nearest dealer's name.

TEMCO® HOT PLATES & FURNACES

THERMO ELECTRIC MFG., CO., 484 HUFF ST., DUBUQUE, IOWA

▲ For more details circle **NED-748 F4** on enclosed inquiry slip ▲



SCINFLEX

ASSURES YOU THE LOWEST VOLTAGE DROP IN THE INDUSTRY!

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

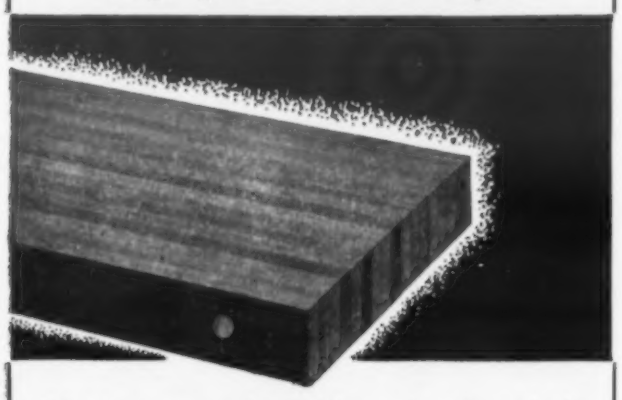
BENDIX SCINFLEX
ELECTRICAL CONNECTORS

Bendix
SCINTILLA DIVISION of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 205 E. 42nd St., New York 17, N. Y.
FACTORY BRANCH OFFICES: 117 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • 512 West Ave., Jenkintown, Pa. Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 8401 Cedar Springs Rd., Dallas 19, Texas • American Bldg., 4 S. Main Street, Dayton 2, Ohio.

▲ For more details circle **NED-749 F4** on enclosed inquiry slip ▲

LAMINATED BENCH TOPS
edge grained hard maple



Tolco tops are manufactured from select pieces of edge grained, hard northern maple. Narrow ¾" maple laminations are electronically glue welded into a homogeneous solid mass. Twice as many laminations, twice as much adhesive means maximum wearability with minimum moisture absorption and warpage. Reinforced with concealed steel tie rods. Finished with non-toxic sealers and lacquers. Tolco tops save on tools and assembly parts. Sizes range from 1¼" to 3" thick, up to 12 feet long and 36" wide. Write for complete information and prices.

THE TOLERTON COMPANY
P.O. Box M658 Alliance, Ohio
Established 1894

▲ For more details circle NED-750 F4 on enclosed inquiry slip ▲

A Platecoil has more heat transfer area than a pipe coil twice its size. Thus it takes only half as much Platecoil to heat a given area. You have 50% less steel to pay for so you can save nearly 50% in initial cost. The Platecoil takes only half as much space in the tank. The greater BTU transfer per unit area of Platecoil also means faster heating or cooling. Platecoils require less maintenance and can be removed without dumping the solution.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL Division Tranter Mfg. inc. LANSING 4, MICHIGAN

▲ For more details circle NED-751 F4 on enclosed inquiry slip ▲

The Expediter Can Tell You About Clearing O.B.I.'s

When he's working against a deadline, unscheduled maintenance and die changes can do serious things to an expediter's blood pressure.
That's why Clearing O.B.I.'s have made so many friends among production people.
After all, isn't dependability the most desirable trait of a friend?

Find out more about Clearing O.B.I.'s

Write for new catalog.

CLEARING MACHINE CORPORATION
6494 WEST 65TH STREET • CHICAGO 38, ILLINOIS
HAMILTON DIVISION, HAMILTON, OHIO

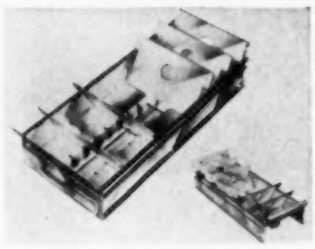
▲ For more details circle NED-752 F4 on enclosed inquiry slip ▲

POWER TURNTABLE
transfers cartons on conveyor lines

Power turntable transfers cartons at 90 or 180-degree angles between two parallel or right-angle conveyor lines. Designated model TT, it takes about 4 ft of floor space and has rotating carrier disk operation. It will handle cartons measuring up to 20 x 20 in. as well as small packages. Rotating 48-in. diameter steel turntable is supported and driven by rubber-faced wheels and is turned by a ½-hp motor at approximately 175 fpm. Packages are aligned by wheel feeder sections which steer materials into desired position. Made by **Rapids-Standard Co.**, Dept. TT, 342 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle NED-753 F4 on enclosed inquiry slip ▲

LIGHTWEIGHT ALUMINUM TRAY
for cycle billing operations

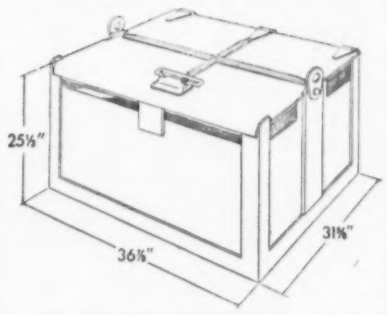


Lightweight aluminum tray is designed to increase efficiency in cycle billing operations. Filing space is greater, records are more visible and larger variety of forms can be accommodated than with previous types. Channel type construction and nylon guide rollers together with hardened bearing in the operating pan give smooth operation and long service life. Handles mounted above center of gravity reduce tendency to tip when fully loaded. Quick record scanning and easy media stuffing are also assured by a 60-degree V-opening provided for the Flex-Bloks. Tray is now standard in all Diebold cycle billing desks and is available in two lengths, both of which will accommodate forms 8½ in. wide and up to 9 in. high. Made by **Diebold, Inc.**, Systems Div., Dept. EF, Canton 2, O.

▲ For more details circle NED-754 F4 on enclosed inquiry slip ▲

INDUSTRIAL TRUCK BATTERIES
compact nickel-iron-alkaline type

Electric industrial trucks making use of MC type of Edison nickel-iron-alkaline storage battery can be provided with 25 per cent more capacity than other types of Edison batteries can provide. Neither steering wheel or pedal heights need be changed and length or width of battery boxes do not have to be increased. Cells employ standard steel tube and pocket construction of the plates. They have identical electrical characteristics and ratings, are rated at the normal 5-hour discharge rate and can be charged at full normal rate. Six sizes with capacities from 285 to 710 ampere-hours are available. Made by **Thomas A. Edison, Inc.**, Edison Storage Battery Div., Dept. NE, West Orange, N. J.



▲ For more details circle NED-755 F4 on enclosed inquiry slip ▲

SNAP-ACTING SWITCH
subminiature type is easy to wire

Making electrical connections within the space limits of miniaturized apparatus is facilitated by this type USM subminiature Unimax snap-acting switch. Sturdy, flat terminal lugs, widely separated in base, have holes so located that wires up to No. 18 can be hooked in from any direction for either single or ganged-switch installations. Terminals are plated for rapid soldering. Switch measures 25/32 x 23/64 x ¼ in. and is offered in plain or leaf-actuator styles. It is rated for single-pole double-throw operation at 5-amp 125/250-v ac or 2 amp at 30 v dc. Made by **W. L. Maxson Corp.**, Unimax Switch Div., Room 1510, 460 W. 34th St., New York 1, N. Y.

▲ For more details circle NED-756 F4 on enclosed inquiry slip ▲

PREVENT BURNS!

SWIVELIER Adjustable
COOLITES
STAY COOL
Using 100-Watt Lamp

"NEVER GETS TOO HOT TO HANDLE"

FOR USE ON:
- lathes
- millers
- drill presses
- other machine tools
- assembly benches
- inspection tables
- desks
- drafting boards
- business machines

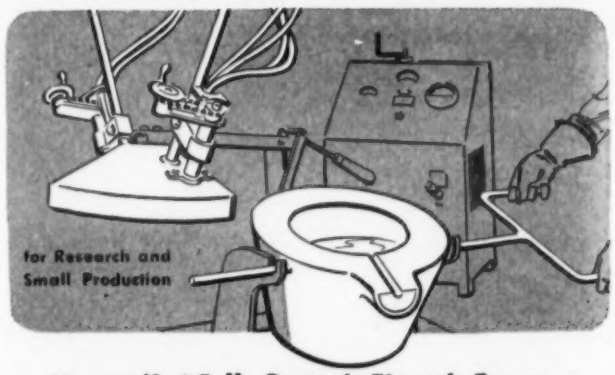
• ALL WIRES ENCLOSED

UNIVERSALLY ADJUSTABLE

• For full details on Coolites, fluorescent and incandescent "Dextra-Lites" and other fine Swivelier Industrial Lighting Units
Write: Dept. NE6 for Bulletin 134.

SWIVELIER COMPANY, Inc.
43—34th St., Brooklyn 32, N. Y.
Showroom: 30 Irving Place, New York, N. Y.

▲ For more details circle NED-757 F4 on enclosed inquiry slip ▲



Versatile 15-lb. Detroit Electric Furnace

Compact 12 KW, 15-lb., Detroit Electric Furnace excels in a variety of research and small production jobs. Converging indirect arc electrodes in cover force arc down over metal for fast melting. Cover lifts and swings aside for easy charging and pouring. Pot can be transported as crucible or tilted to pour from stand. Insulated pot equipped with permanent lining or removable crucibles. Power unit and meters contained in one cabinet, require only simple wiring to electrodes.

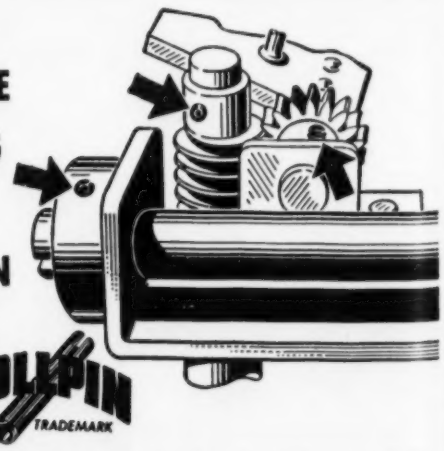
Write today for complete information on Type PT Detroit Electric Furnace.

FEMA

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

▲ For more details circle NED-758 F4 on enclosed inquiry slip ▲

FAST, ACCURATE PINNING OF PRECISION SHAFTS WITH ROLLPIN TRADEMARK



Rollpin speeds production alignment of close tolerance shafts. The slotted, hollow steel spring pin, with chamfered ends, is simply pressed or driven into holes drilled to normal production tolerances. It compresses as driven, is self-locking and vibration-proof. Rollpin is light, easily removable, reusable and has a shear strength greater than a solid pin of the same diameter. Diameters from 1/16" to 1/2".

Rollpin, in place of rivets, set screws, dowels and stop pins can cut production costs as much as 90%. For detailed information on any electronic fastening problem, write: Elastic Stop Nut Corporation of America, 2330 Vauxhall Road, Union, New Jersey. Address Dept. R26-637.

ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

▲ For more details circle NED-759 F4 on enclosed inquiry slip ▲

DE•STA•CO HELPS PUT SKYLIGHT IN THIS CAR

Photos courtesy Ford Motor Company, Detroit Macoid Company.

Eleven Model 210 TU De•Sta•Co Toggle Clamps position and hold hot plastic sheets during the vacuum molding process used to produce transparent car roofs for Ford and Mercury automobiles. This fixture requires positive holding pressures during the 10 minute draw of Plexiglass sheet heated to 300° F. Two-second engagement and release of the De•Sta•Co Toggle Clamps speeds production, assures accuracy.

De•Sta•Co Toggle Clamps are available in over 45 models, with positive holding pressures up to 4000 pounds, for any work holding application.

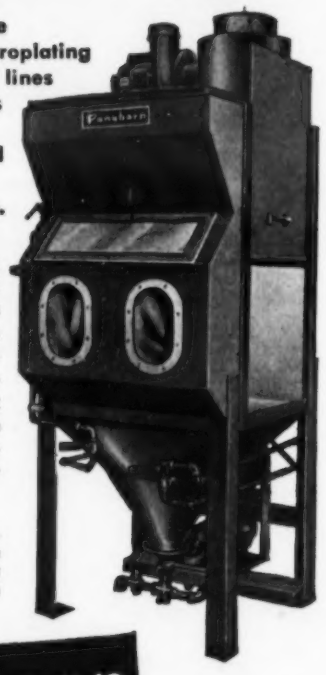
Write for free catalog today.

DE•STA•CO DETROIT STAMPING CO.
360 MIDLAND AVE. • DETROIT 3, MICH.

▲ For more details circle NED-760 F4 on enclosed inquiry slip ▲

Pangborn HYDRO-FINISH

- deburrs • removes scale
- prepares surfaces for electroplating
- removes, blends grinding lines
- finishes threaded sections for fit
- improves die making and maintenance
- improves cutting tool life.



PANGBORN Hydro-Finish does all these jobs and more! Fine mesh abrasives suspended in water give you a precision finish . . . hold tolerances to .0001". Vary abrasives, air pressures, work distances, ratio of liquid to abrasive and you can do almost any finishing job faster and better!

GET THE FACTS on how Hydro-Finish can save you money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Pangborn BLAST CLEANS CHEAPER *with the right equipment for every job*

▲ For more details circle NED-761 F4 on enclosed inquiry slip ▲

WIRE-MESH PRODUCTS

for all filtering and straining applications. All meshes, all weaves, all alloys.

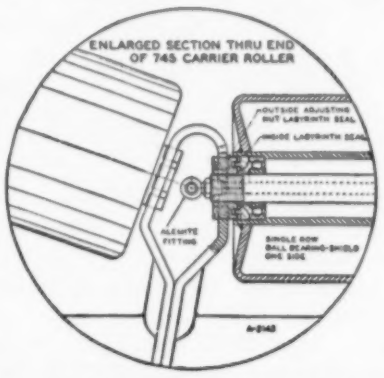
Send Specifications for an estimate. Department 11.

THE C. O. JELLIFF MANUFACTURING CORP. SOUTHPORT, CONN.

▲ For more details circle NED-762 F4 on enclosed inquiry slip ▲

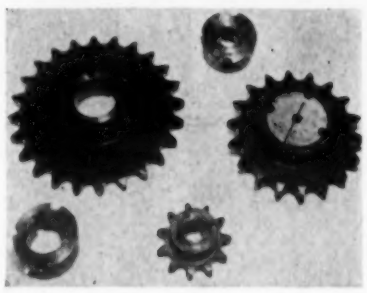
BELT CONVEYOR CARRIER for 18, 24, 30 and 36-in. belts

Available in sizes for 18, 24, 30 and 36-in. belts is SP-745 belt conveyor carrier. Low cost unit has 4-in. diameter rollers with spun ends mounted on precision ball bearings. Die cast labyrinth seals protect bearings and Alemite fittings are provided for relubrication if desired. However, sufficient grease is carried in bearing chamber to operate rolls on a "lubricated - for - life" basis. Carrier rolls are interchangeable and can be inserted or removed from brackets without tools. Made by **Stephens-Adamson Mfg. Co.,** Standard Products Div., 12 Ridgeway Ave., Aurora, Ill.



▲ For more details circle NED-763 F4 on enclosed inquiry slip ▲

ROLLER CHAIN SPROCKETS larger pitches added to line



Single and double hub types of Taper-Lock roller chain sprockets are now available in an expanded line of stock sizes. Added to line are sizes for No. 120 (1½-in. pitch), No. 140 (1¾-in. pitch) and No. 160 (2-in. pitch). Available are No. 120 single hub sprockets in nine sizes with 13 to 26 teeth and 75 hp maximum rating; No. 120 double hub driven, five sizes, 35 to 80 teeth; No. 140 single hub sprockets, ten sizes, 12 to 26 teeth, 95 hp maximum rating; No. 140 double hub driven sprockets, four sizes, 35 to 70 teeth; No. 160 single hub sprockets, 11 sizes, 11 to 26 teeth, 125 hp maximum rating; No. 160 double hub driven, three sizes, 35 to 60 teeth. Only five bushing sizes are required to fit the expanded line. They are stocked in 54 bore sizes. Made by **Morse Chain Co.,** Dept. ND, 7601 Central Ave., Detroit 10, Mich.

▲ For more details circle NED-764 F4 on enclosed inquiry slip ▲

TRACTOR ADAPTOR makes possible use of 11 attachments

Hydraulically operated Davis Pit-Bull adaptor fits any Ford or Ferguson tractor and makes possible the use of any of 11 attachments. These include

bucket, trencher, dozer blade, swinging crane, roller, mower, brush, lift fork and hammer. An operator's cab is also available as an optional accessory. Installation of the adaptor includes reversing seat and controls and adding a supplementary syncromesh transmission. This gives complete control and visibility for all operations, and permits reversing without changing gears. Four speeds are provided in each direction. All attachments are hydraulically operated and quick couplers are fitted on hydraulic hose lines to speed attachment changes. Made by **Mid-Western Industries, Inc.,** Dept Z, 1009 S. West St., Wichita, Kans.

▲ For more details circle NED-765 F4 on enclosed inquiry slip ▲

DO YOU KNOW? Graphically depicting each operation in the production of precision-molded rubber parts for all types of industries, 20-minute 16-mm sound-color motion picture "Molded Rubber" is available free for showing to technical and business groups. In addition to showing how parts are made, film explains applications of various parts molded from rubber. Offered by Acushnet Process Co., 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle NED-766 F4 on enclosed inquiry slip ▲

"ALL MOTORS ARE NOT ALIKE!"

FOR RUGGED SERVICE, Reliance Motors are built better to last longer. These Precision-Built Motors combine maximum strength with shock-resistant frame and bearing-bracket construction. Write for new Bulletin B-2102.

B-65

RELIANCE *Precision-Built* MOTORS

RELIANCE ELECTRIC AND ENGINEERING CO.

1082 Ivanhoe Road, Cleveland 10, Ohio • Sales Representatives in Principal Cities

▲ For more details circle NED-767 F4 on enclosed inquiry slip ▲

There's many a slip... but it only takes one to cost money!

PABCO GRIP-TREAD MASTIPAVE FLOOR COVERING

Saves Money... Four Ways!

NON-SLIP, SUPER-TOUGH RESILIENT, LOW-COST

These four money-saving ways are why factories, schools, office buildings, hospitals, and Governmental institutions and others specify Pabco Grip-Tread MASTIPAVE...

❶ *Non-Slip* Grip-Tread Mastipave prevents accidents. It's the safe floor with built-in brakes.

❷ *Non-Slip* Grip-Tread Mastipave is super-tough . . . resists wear day-in and day-out. Replacement costs are at a minimum.

❸ *Non-Slip* Grip-Tread Mastipave is resilient, reduces foot fatigue, increases job efficiency.

❹ *Non-Slip* Grip-Tread Mastipave is low cost. Low-cost installation, low-cost maintenance, long wearing qualities. You can't lose—investigate today. Clip the coupon below and learn how you can show a real money value to your company.

FILL OUT THIS COUPON

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. B nearest office)

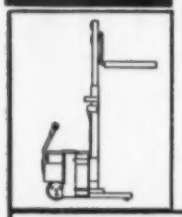
GENTLEMEN: Without cost or obligation to me, please send your folder, "Every Building needs Pabco MASTIPAVE."

NAME _____

ADDRESS _____

CITY _____ STATE _____

▲ For more details circle NED-768 F4 on enclosed inquiry slip ▲



REVOLVATOR GO-GETTER Lift Efficiency

Door-To-Door Warehouse Handling Efficiency

For the efficient flow of goods within and without a plant—from production to storage—to shipping—there is no lift truck on the market today that surpasses the Revolvator Go-Getter line.

Illustrated above is the high lift model Go-Getter—a favorite of the food producers—accepted throughout all industry. In 2000-3000 lb. capacities—remarkably adept in narrow aisle work, the Revolvator Go-Getter high lift truck permits great economies in warehousing.

Write for the full facts today.

REVOLVATOR CO.
8732 Tonnele Ave. North Bergen, N. J.

For more details circle NED-769 F4 on enclosed inquiry slip

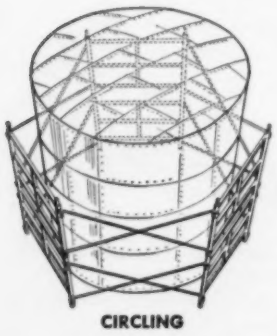
Overhead Work's *Not just 'UP'*

When you have to go *around* a job or *get inside* a curved structure, buy Universal Ezebilt—*the one scaffold* you can use on most every job. For example, Ezebilt's exclusive Gravity-Lock brace mechanism lets you "swivel" standard panels to "circle" curved surfaces, or to "rack-down" safely in narrow passages. And you don't need to fuss with nuts and bolts or loose parts—Ezebilt's rustproof Gravity-Lock helps you to put your scaffold up and take it down in much less time—handle jobs easier and faster because there are *'no bolts to master.'*

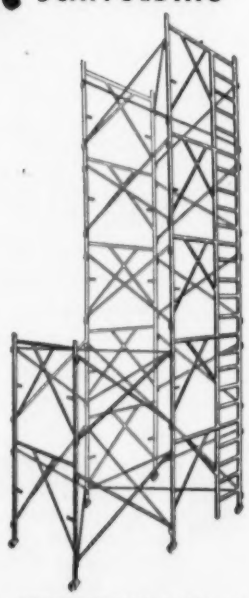
UNIVERSAL Ezebilt SCAFFOLDING

Write for New Catalog

Shows how to "custom-build" work platforms to any size or shape with standard Universal Ezebilt Scaffolding.



CIRCLING



SAFETY ROLLING TOWER

Distributors offer fast help and service. See your phone directory.

UNIVERSAL MANUFACTURING CORP.
ZELIENOPLE 6, PA.

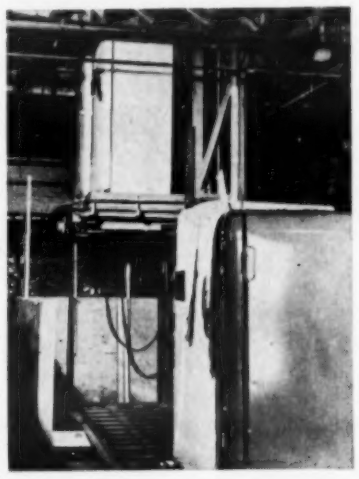
For more details circle NED-770 F4 on enclosed inquiry slip

MAGNETIC RETRIEVING TOOL
for nuts, bolts, chips, tools, etc.

Handy Magimmick retrieving tool magnetically recovers small parts, tools, chips, broken taps and similar items from relatively inaccessible locations. It consists of an Alnico V magnet fitted to an adjustable telescopic handle. Magnet is unaffected by oils and greases and lasts indefinitely. Ball joints permit tool to be readily adjusted to desired angle. Three models are available, having sizes of 13 in. closed and 26 in. open, 7 in. closed and 14 in. open and 8½ in. nontelescopic. Made by **Ullman Products Corp.**, Dept. NE, 15 River St., Norwalk, Conn.

For more details circle NED-771 F4 on enclosed inquiry slip

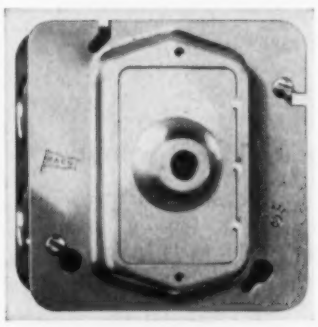
ELECTRIC FREIGHT ELEVATORS
independent of building structure



Use of welded steel columns which are independent of the building structure enable Weld - Bilt prefabricated electric freight elevators to be used in modernization of older factory buildings and warehouses. Motors lift or lower platform or cage at rate of 39 fpm. Capacities range up to 4000 lb. Elevators are practical for lifts up to four floors and meet or exceed local safety codes. Sections can be added in the future, and entire unit can be moved to a new location. Made by **West Bend Equipment Corp.**, 329 Water St., West Bend, Wis.

For more details circle NED-772 F4 on enclosed inquiry slip

OUTLET POSITIONER
locates outlets after plastering

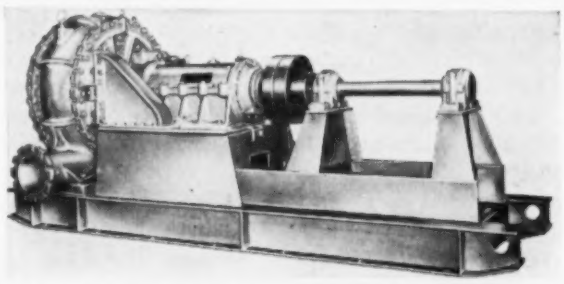


This locator ring is designed to be placed over electrical wiring outlets before plastering. After plastering is completed, the raised section remains visible. Even where warped studding requires extra plaster thickness, raised center boss is always visible. A leverage hole is situated in the center of this boss so that the knockout section can readily be removed for access to the outlet box. Fitting also serves to prevent plaster from entering the outlet box or wiring conduit. It is available in ½ and ¾-in. raised sizes. Made by **All-Steel Equipment Inc.**, 417 John St., Aurora, Ill.

For more details circle NED-773 F4 on enclosed inquiry slip

DREDGE PUMPS
available in various materials

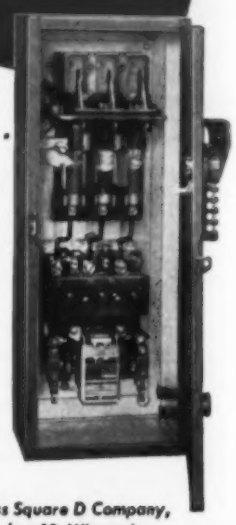
Designed for use in dredging or hydraulic conveying systems, models GA and GAF dredge pumps are available in various alloys to handle different materials. Pumps combine low speeds and reliability with modern hydraulic design, high heads and efficiency. Improvements on former designs include larger bearings and drive shaft and improved bracing. Maintenance is also easier. Made by **Morris Machine Works**, 20 E. Genesee St., Baldwinsville, N. Y.



For more details circle NED-774 F4 on enclosed inquiry slip

for GREATER SAFETY & LONGER STARTER LIFE

THIS SQUARE D *COMBINATION STARTER...*



• You save time and money when you install one device instead of two. You save mounting space, too. And you have a neater, more compact installation.

Square D's Switch gives you no less than eight design features which provide plus performance and operator safety.

Square D's Starter design provides quicker, easier maintenance and exceptionally long life.

Write for Bulletin 8538. Address Square D Company, 4041 N. Richards Street, Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-775 F4 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

MANUFACTURED BY
TRI-SAW CORPORATION
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

For more details circle NED-776 F4 on enclosed inquiry slip

DAVIS *Continuous combustible gas alarm systems*

REMOTE HEAD AND TUBE SAMPLING TYPES

A complete line of Davis Gas Alarm Systems, together with a number of accessories, is available to meet varying requirements in protecting life, property, and processes against the explosive hazards of combustible gases and vapors in air.

They function by means of automatic continuous sampling of the flammable gas-air mixture, and give audible and visual signals when the gas concentration approaches dangerous limits.

Davis also offers special equipment designed to meet particular requirements or applications.

For complete information, write for Technical Bulletin 11-36

INSTRUMENT DAVIS DIVISION
DAVIS INSTRUMENTS
Division of Davis Emergency Equipment Co., Inc.
54 Halleck Street, Newark, N. J.

Progressive Manufacturers of Gas Analysis Instruments

For more details circle NED-777 F4 on enclosed inquiry slip

Moving packaged drugs from floor to floor on Ferguson roller and belt conveyors.

MAKE YOUR MOVES ON

Ferguson Conveyors

You have parts, products, packages to move . . . from floor to floor . . . department to department . . . one end of a line to another. What's the best way to do these jobs? On Ferguson Conveyors. They're custom engineered to fit the need . . . to save handling . . . to speed assembly, packaging, shipping. Every day, users in all types of industries everywhere get more efficient materials handling at lower operating costs with Ferguson Conveyors.

Write, wire or call us today with your materials handling problem and for facts and figures on Ferguson belt, roller and wheel conveyors.

HARRY J. ferguson COMPANY
125 WEST AVE., JENKINTOWN, PA.
OGentz 4401

▲ For more details circle **NED-778 F4** on enclosed inquiry slip ▲

"Retains flexibility—resists abrasion" says Redmond Company of TEMFLEX* 105 TUBING

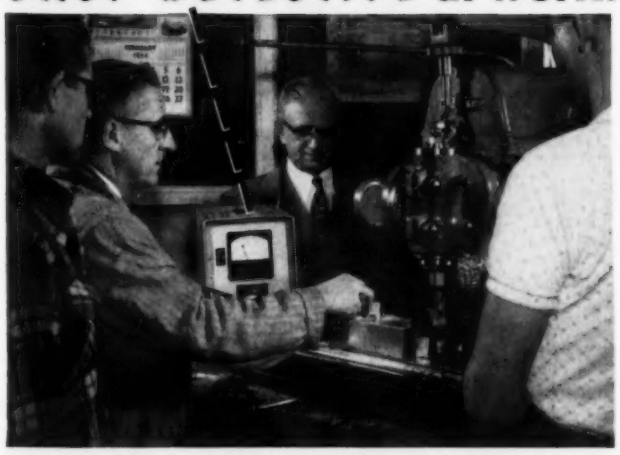
In making field connections for the TRI-FLUX shaded pole motors built by Redmond Company, Inc., Owosso, Mich., Temflex 105 Tubing is slipped over the lead from one field coil, which is then twisted together with the next coil lead. Wires are welded and bent back; the tubing is drawn over the welded joint, and the field varnished and baked. "Temflex 105 resists baking heat, offers high dielectric strength, flexibility and resistance to abrasion," says Redmond.

Literature and samples of this Irvington extruded plastic tubing—approved by Underwriters' Laboratories for continuous operation in air at 105° C. . . . and for 90° C. *in oil* . . . are yours for the asking. *T. M. Reg. U. S. Pat. Off.

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle **NED-779 F4** on enclosed inquiry slip ▲

SHOP DETECTIVE at work!



SEE what the PROFILOMETER can disclose about *your* production operations—SEE how it measures surface roughness, on parts that *you* select — and FIND OUT how helpful that can be, in unexpected ways. *A demonstration will tell you, IN YOUR PLANT* — with no obligation on your part.

FREE BULLETIN LT90 describes our demonstration service—tells what we do, how long it takes, and why you'll find it interesting. WRITE TODAY for your copy!

Profilometer is a registered trade mark.

MMCo MICROMETRICAL MANUFACTURING COMPANY
345 S. MAIN ST. ANN ARBOR 9, MICH.

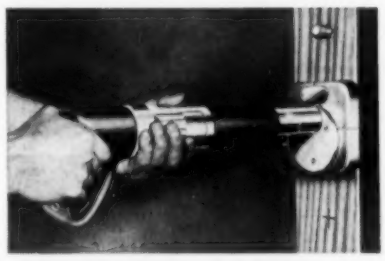
▲ For more details circle **NED-780 F4** on enclosed inquiry slip ▲

WIRE ROPE SPLICING DEVICE is cold pressed by 300-ton squeeze

As many as 20 or 30 wire rope splices can be made in an hour by system which utilizes the aluminum alloy Jal-Klamp. Device is a high strength clamp or sleeve that is squeezed around wire rope in a 300-ton hydraulic press. Metal actually cold flows into space between wires in the strands and between strands themselves, producing a splice that is as strong as rope itself. Method can be used on wire rope of any diameter up to 2 in. and with any type of center, including fiber. Joint makes splice water tight. Clamps, as well as leased presses for applying them are distributed by **Jones & Laughlin Steel Corp.**, 456 Liberty Ave., Pittsburgh 30, Pa.

▲ For more details circle **NED-781 F4** on enclosed inquiry slip ▲

POWDER-ACTUATED FASTENER sets pins in steel or concrete

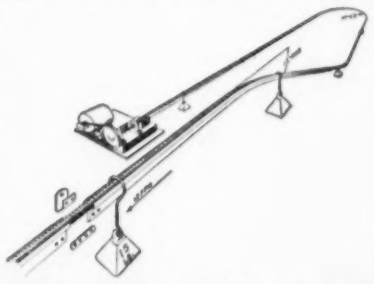


Hardened steel pins can be set into steel or concrete at the rate of five to eight per minute by the Drive-it powder-actuated fastening tool. It uses a single .38 blank cartridge. Safety pads for conduit clamps, junction boxes, metal lath, channels and other special fittings are available. Pads protect both operator and working surface and a two-handed firing sequence makes it impossible to fire tool in the air or at a dangerous angle. Made by **Powder Power Tool Corp.**, Dept. 5, 7526 S. W., Macadam Ave., Portland 1, Oreg.

▲ For more details circle **NED-782 F4** on enclosed inquiry slip ▲

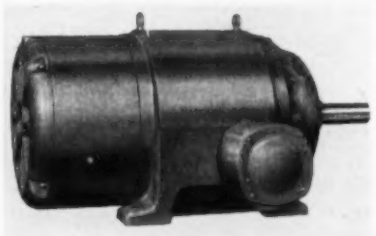
SCREW-TYPE CONVEYOR for handling light loads

Designed for handling light loads up to 15 lb per unit weight, Monoflo conveyor consists of a flexible carbon steel screw turning in a metal retaining trough. Top of the trough is open to expose the screw. Load carrying hooks are placed over the trough, engage the screw thread and are moved at any fixed or variable speed varying from 0 to 12 fpm. Permissible loading of the conveyor is up to 15 lb per foot. Load movement is smooth and steady and virtually noiseless. Conveyor can be curved vertically or horizontally up to a 4-ft radius, and vertical inclines up to 15 degrees are permissible. It can be either ceiling or bench mounted. Made by **M-H Standard Co.**, 513 Communipaw Ave., Jersey City 4, N. J.



▲ For more details circle **NED-783 F4** on enclosed inquiry slip ▲

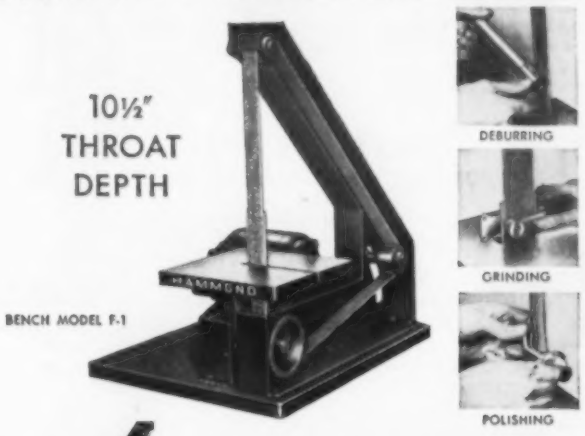
EXPLOSIONPROOF MOTORS ratings up to 150 hp available



Maximum ratings available in U. S. horizontal totally-enclosed and explosionproof motors have been increased up to 150 hp. Type SD motors are protected against dirt, dust, oil and chemicals, and type SE motors are for service where inflammable gases may be present. Both are double-enclosed with built-in fan for ventilation and heat dissipation. Asbestos-protected windings, removable stator plate, dynamically balanced cast aluminum rotor, Lubriflush bearings and normalized castings are other features. Motors can be supplied with variable speed or geared torque multiplying devices and are UL approved. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

▲ For more details circle **NED-784 F4** on enclosed inquiry slip ▲

Hammond 1" FLEXIBLE BELT GRINDER



MODEL F-1 WITH DUST COLLECTOR

Here is the answer to costly hand filing and costly grinding, polishing and deburring. Deep throat opening of 10½" permits finishing of irregular shapes and hard to get at areas.

Low in cost, but built up to Hammond standards. Not a "home workshop" tool.

You will be AMAZED at the uses you will find for the F-1.

Clip this ad to your letterhead today. Catalog and price list will be sent at once.

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

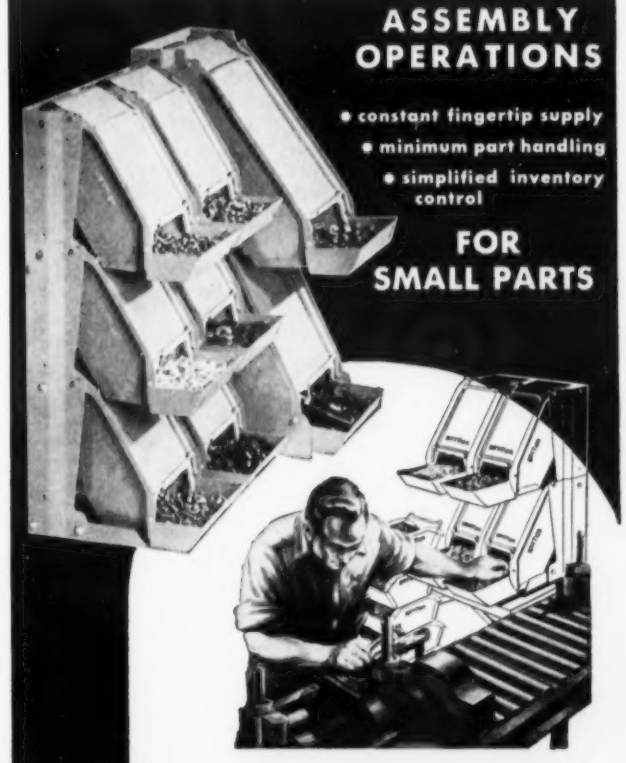
▲ For more details circle **NED-785 F4** on enclosed inquiry slip ▲

New NESTIER® **HOPPER RACK**

SPEEDS ASSEMBLY OPERATIONS

- constant fingertip supply
- minimum part handling
- simplified inventory control

FOR SMALL PARTS



NesTier Hopper Racks meet the need for greater efficiency in assembly and production operations. Standard NesTier tote boxes are converted into small parts hoppers by means of new combination lid and tray. A housing rack that can be bench or wall-mounted supports hoppers at 45° angle. Rack design permits multiple unit installations by bolting sections together vertically, side-by-side or back-to-back. Two Hopper Rack and lid sizes are available for use with No. 120 and No. 175 NesTier boxes.

Central supply point can fill NesTiers, batch weigh and stack them on pallets for delivery to work stations by hand or power lift trucks. Empty hoppers can be dismounted and replaced with loaded units in seconds.

WRITE FOR NEW BULLETIN HR-101

NESTIER® IT NESTS—IT TIERS

C-138-DN

THE CHAS. WM. DOEPKE MFG. CO., INC.
8884 Blue Ash Rd. • Rossmoyne, Ohio

▲ For more details circle **NED-786 F4** on enclosed inquiry slip ▲

Quality...
WHERE YOU NEED IT MOST

LUNKENHEIMER
POP SAFETY AND RELIEF VALVES

Abnormal overpressures are dangerous — and that's why it pays to insist on Lunkenheimer quality when you specify or buy Pop Safety or Relief Valves for any service. Lunkenheimer design, materials, and workmanship are world-famous for excellence. Their record of performance is unsurpassed.

THE DIFFERENCE BETWEEN POP SAFETY AND RELIEF VALVES

Pop Safety Valves are used with gases, including steam. They pop wide open when the set pressure is reached . . . snap shut when it has dropped.

Relief Valves are used with liquids. They start to open at the set pressure but require about 20% overpressure to open wide. They start to close as soon as pressure drops and shut tight when the set pressure has been reached.

WRITE FOR CIRCULAR 502

The Lunkenheimer Co., Cincinnati 14, Ohio.

LUNKENHEIMER®
THE ONE *Great* NAME IN VALVES
L-254-3A

▲ For more details circle **NED-787 F4** on enclosed inquiry slip ▲

You will soon discover these Guardian Contact Switches make no compromise with quality and performance despite their reasonable price. They are quickly available in a vast variety of contact combinations and in all popular materials from Guardian's enormous stocks of standard and special blades, lug adaptors, insulating separators and bushings ready for immediate assembly. Fine silver, silver alloy, platinum-ruthenium and Fasloy #7 contacts with blade materials of all types are available.

SNAP-ACTION
REVERSING SWITCHES

GUARDIAN ELECTRIC
1626-G W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle **NED-788 F4** on enclosed inquiry slip ▲

"AMF De Walt saves us 80% on maintenance time and labor!"

says Marty Kule, Lezius-Hiles Printing Company, Cleveland, Ohio

"A typical job AMF De Walt® did for us was cutting and drilling lumber for 20 stock trucks. All the 1¼" pieces of lumber for one truck were cut and drilled in 1½ hours. Without AMF De Walt, the job used to take 8 hours. What's more, each came out accurate, alike, and required no finishing. The savings on this job alone half paid for our AMF De Walt!"

Versatile, economical, does all jobs. Fast, safe, accurate, compact. Prices start at $229 for ½ H. P. model. Send for catalog to De Walt Inc., Dept. NED-54-6 Lancaster, Pa.

De Walt Inc. Lancaster, Pa.
DEWALT
POWER SAWS
In Canada: De Walt Canada Ltd., Guelph, Ontario

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, New York

▲ For more details circle **NED-789 F4** on enclosed inquiry slip ▲

LIQUID LEVEL CONTROLLER
for electrically conductive liquids

All electrically conductive liquids can be controlled by type 13DJ3 liquid level meter. Stainless steel corrosion - resistant probes operate at maximum voltage for all resistivity ranges of 11.5 v and at current ratings from 6 ma to less than 1 microampere at maximum resistivity. This results in safe operation even when pilot contacts are exposed in explosive media. Flexible terminal panel connections provide for operation as pump-up or pump-down control or as high or low safeguard level with fail-safe action. Control can be located up to 100 ft from probe installation. Control power supply is 115 or 230 v ac. Heavy duty relay can be wired for double-break operation to carry up to 20 amp noninductive or to operate a ½-hp motor directly. Made by **Photoswitch Inc.,** 77-89 Broadway, Cambridge 42, Mass.

▲ For more details circle **NED-790 F4** on enclosed inquiry slip ▲

ALUMINUM LADDER SCAFFOLD
4 ft 6-in. width gives stability

Extra-wide aluminum ladder scaffold for maintenance, relamping and similar operations is quickly assembled from easy-to - handle aluminum components. Its 4½-ft width provides good stability. Unit serves as a base for Fold-A-Way scaffolds, and will clear obstructions up to 4 ft 10 in. high by 5 ft wide. Illustration shows how scaffold braces are moved up to the top three rungs to provide base for Fold-A-Way scaffold. Ladder frames for the basic unit of the extra-wide scaffold are 6 ft high. Intermediate and extension sections are available and measure 5 ft 4 in. and 4 ft high respectively. Braces provide spans of 6, 8, or 10 ft. Scaffold is equipped with ball-bearing extension legs providing 24-in. height adjustment. Made by **Patent Scaffolding Co.,** 38-42 Twelfth St., Long Island City 1, N. Y.

▲ For more details circle **NED-791 F4** on enclosed inquiry slip ▲

TRACTOR SHOVEL
will lift up to 1200-lb loads

This 12 cu ft bulk materials handling tractor shovel is hydraulically operated and will lift up to 1200 lb. It will travel up to 13.88 mph in reverse and 7.66 mph forward, has a 6½ ft turning radius, dumping clearance of 4½ ft and a reach of 2 ft 7 in. Bucket extends full width of tires to permit working against walls and in corners and rear-wheel steering permits easy maneuvering. Low bucket level position facilitates crowding into material at ground level and enables bucket to be tilted back before hoisting. A 33-hp, 140-cu in. gasoline engine powers the tractor, rear-mounted to give load stability. Made by **Jaeger Machine Co.,** 350 Dublin Ave., Columbus 16, O.

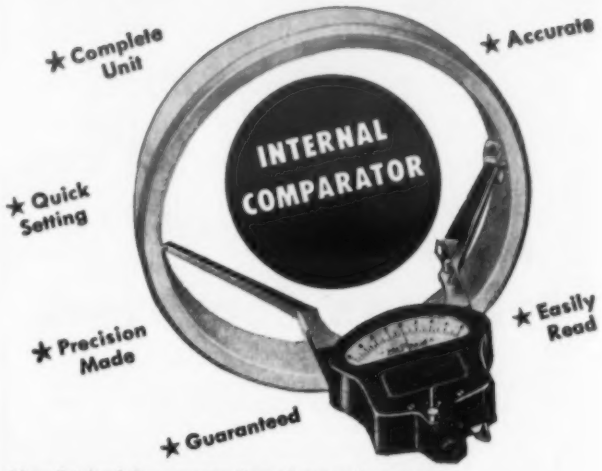
▲ For more details circle **NED-792 F4** on enclosed inquiry slip ▲

Industrial Television

Radio Corp. of America, Industrial Products Div. —For use in centralizing remote control of various processes, closed circuit industrial television systems are covered in 8-page illustrated form 2J8837 Rev. Various components of such systems are shown and described in detail, and company's planning, installation and service arrangements are discussed.

▲ For more details circle **NED-793 F4** on enclosed inquiry slip ▲

NEW "Inte Rapid"



New Internal Comparator Gage has gaging capacity from ⅜" diameter to 6" diameter. Meter-type scale, graduated in .0005", shows at a glance whether holes are oversize or undersize and by exactly how much.

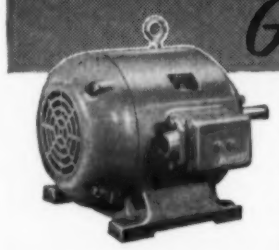
Gage is designed for use on Jib Bores, Boring Machines, Internal Grinders, Lathes and for all Inspection Personnel.

For complete details . . . write for Comparator Specification sheet.

PORTAGE Double-Quick TOOL CO.
1043 Sweitzer Avenue • Akron 11, Ohio

▲ For more details circle **NED-794 F4** on enclosed inquiry slip ▲

Great Motors from Great Britain!



- **world-famous NEWMAN MOTORS**
- **net savings up to 40%**
- **immediate delivery**
- **unconditionally guaranteed**
- **superior design— to N.E.M.A. standards**

For the first time, the complete world-famous line (2 million installed in 62 countries since 1935) of NEWMAN MOTORS, built to N.E.M.A. standards, is offered to the American Market in sizes up to 230 H.P.

These are new, high-quality motors stamped with the prestige of a great motor-making company. Vast savings, dependability, unconditional guarantee are offered to American buyers.

Any motor sent free and without obligation for examination and testing. Factory stocks at New York, Chicago, Savannah, Houston, Portland, San Francisco and Los Angeles.

Write for a catalog and price list to-day

Newman INDUSTRIES (AMERICA) INC.
45 BROAD STREET, NEW YORK 4, N.Y.

▲ For more details circle **NED-795 F4** on enclosed inquiry slip ▲

CESCO *RIGHT... before your Eyes!*

Send TODAY for CESCO literature

CHICAGO EYE SHIELD COMPANY • 2329 Warren Boulevard, Chicago 12, Illinois

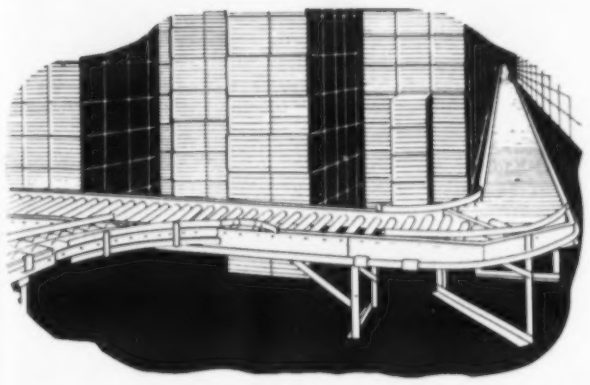
CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Dallas, Detroit, East Orange, Houston, Indianapolis, Kansas City, Knoxville, Little Rock, Los Angeles, Louisville, Mexico City D.F., Milwaukee, Montreal, Peoria, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa, Wichita

▲ For more details circle **NED-796 F4** on enclosed inquiry slip ▲

Mathews Live Roller Conveyers Play A Big Role In Modern Package Handling Systems

ELLWOOD CITY, PA.—Many manufacturers are discovering live roller conveyers to be the answer to their package conveying problems. It is possible to deflect loads and hold them on the live roller conveyers without stopping the conveyer—they can be reversible and operated at whatever speed required. *Mathews* Live Roller Conveyers can be belt or chain driven, hung close to the ceiling, set at working height on the floor or operate between buildings. Call your nearby *Mathews* representative, or ask for complete information. Write MATHEWS CONVEYER COMPANY, Ellwood City, Pa.



You'll handle it better with

MATHEWS CONVEYERS

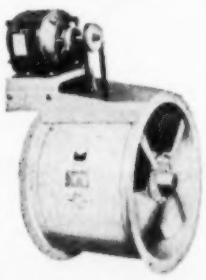
▲ For more details circle NED-797 F4 on enclosed inquiry slip ▲

GET THE FACTS...

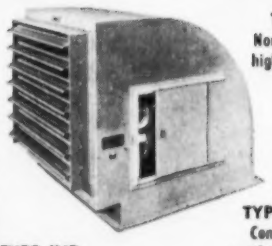
. . . and forget the problems! Without obligation, a Chelsea ventilating engineer will survey your plant—tell you *exactly* what type and size fan should be installed in every problem location.

You'll get all the facts you need for a decision!

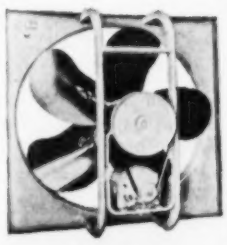
CHELSEA FANS...



TYPE PLDX
Non-overloading for high static pressures



TYPE PH
Complete penthouse unit.



TYPE IND
For normal ventilation.

The fans shown above are only a few of the many Chelsea models—each in a variety of sizes and capacities . . . Your request will bring a complete detailed catalog plus the name of your local Chelsea industrial distributor.

Every Chelsea fan has "Certified Ratings". You can depend upon accurate, carefully calculated air deliveries exactly as advertised.

CHELSEA FAN & BLOWER CO., INC.
PLAINFIELD, NEW JERSEY
MANUFACTURERS OF INDUSTRIAL VENTILATING EQUIPMENT

▲ For more details circle NED-798 F4 on enclosed inquiry slip ▲

DRILLING & TAPPING MACHINES
many different models in line

Designed for drilling and tapping for toolroom and production work, model MS motor spindle machines are available in many different models. The 2MS machines with 12 or 15-in. overhang are made with one to eight spindles. A 2-hp motor gives drilling capacity of ⅞ in. with extra capacity to 1¼-in. using back gears. They can be furnished with semiautomatic power feed, reversing motor tapper and lead screw tapper attachments. Spindle speeds range from 115 to 3600 rpm. Heavy duty model 4MS machines have similar features but are more heavily built and have drilling capacities up to 1½-in. One to four-spindle types are available with 12 or 16-in. overhangs. Available spindle speeds range from 112 to 1200 rpm. Made by **Edlund Machinery Co.**, Cortland 48, N. Y.

▲ For more details circle NED-799 F4 on enclosed inquiry slip ▲

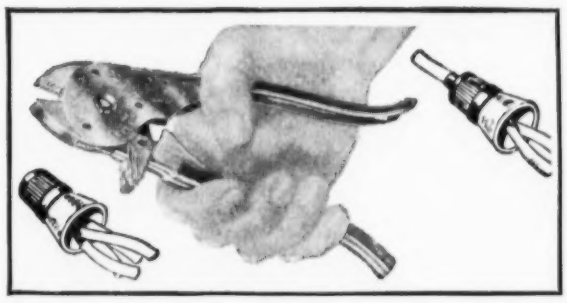
POWER TRANSMISSION DRIVE
uses V-ribbed belt, grooved sheave

Single, endless rubber belt utilized by the Poly-V Drive is made with series of parallel V-ribs molded lengthwise plus uninterrupted, high strength member of synthetic cords across entire width. Ribs are designed to mate precisely with sheave grooves. Belt covers full width of drive member, distributing load equally over entire drive surface and delivering up to 50 per cent greater horsepower. Belt turnover and progressive sinking in sheave grooves is prevented. Belt matching problem is also eliminated by new drive. Available two sizes, No. 187 and 375, belts meet all drive requirements upwards from 3-in. pitch diameter sheaves and 50-in. belt pitch lengths. Made by **Raybestos-Manhattan, Inc.**, Manhattan Rubber Div., 61 Willet St., Passaic, N. J.

▲ For more details circle NED-800 F4 on enclosed inquiry slip ▲

SPLICING TOOL & CONNECTOR
for use on solid and stranded wire

All combinations of solid and stranded wire from No. 18 to No. 12 in applications up to 221° F can be spliced with the Nycap preassembled nylon insulated



splicing connector and the Nycapper wiring hand tool. Nycap is made up of two molded parts, one, a closed end sealing cap and the other, an open conical skirt with press fitted heavy walled copper splicing sleeve. Installation and all preparatory cutting, stripping and twisting operations are performed by the Nycapper tool. Made by **Buck Electrical Mfg. Co.**, Dept. NED, 139 Highland Pkwy., Roselle, N. J.

▲ For more details circle NED-801 F4 on enclosed inquiry slip ▲

Cutting & Grinding Coolant

Master Chemical Corp.—4-page folder "There's a Real Chemical Difference . . ." contains a pocket-size 44-page booklet on cutting and grinding procedures. The advantages of Trim coolant are pointed up in both pieces. Product does not support bacterial growth and can be successfully used for many machining operations. Recommended concentrations for variety of jobs are shown. Coolant is water soluble.

▲ For more details circle NED-802 F4 on enclosed inquiry slip ▲

GOODALL
HYDRAULIC CONTROL HOSE

A strong, tough, durable hose for high pressure hydraulic control lines on all kinds of equipment—from presses to road graders. Grease-and-oil resistant Synplastic tube. Multiple-braid steel wire carcass. Weather-and-wear-resistant Synplastic cover. Built to withstand continuous flexing. An excellent hose, also, for high pressure greasing service.

Available With Improved Type Couplings Attached

Goodall Hydraulic Control Hose can be furnished plain or as complete assemblies with couplings attached, ready for immediate installation. Couplings are of improved pressed-on type . . . virtually *molded to the hose* by a special method that requires no buffing or cutting of the cover, and prevents coupling from blowing out at highest working pressures.

Contact Our Nearest Branch for Details, Prices

GOODALL RUBBER COMPANY
GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
Branches: Philadelphia • New York • Boston • Pittsburgh • Indianapolis • Chicago • Detroit • St. Paul • Los Angeles • San Francisco • Seattle • Spokane • Portland • Salt Lake City • Denver • Houston • Goodall Rubber Company of Canada, Ltd., Toronto • Distributors in Other Principal Cities
Est. 1870

▲ For more details circle NED-803 F4 on enclosed inquiry slip ▲

new T&B ENGINEERED cable cutter
CUTS ARMORED CABLE!

Replace old-fashioned hack saw methods of cutting armored cable with T & B's new Cable Cutter, Cat. No. 364. It cuts faster, cleaner, and with considerably less effort. Specially designed cutting edges slice cleanly, leaving no jagged edges . . . no cable deformation. Forged, hardened steel blades overlap ⅛-inch to permit repeated resharpening. Cuts cable sizes up to 4/0; insulation sizes up to 1 inch. For further information, contact your T & B Distributor or write direct.

. . . AS WELL AS

armored lead cable
nonmetallic sheathed cable
service entrance cable
lead-covered cable
super service cords
trench lay cable
flexible conduit
rope (hemp)
hose

Catalog No. 364

THE THOMAS & BETTS CO.
Incorporated T419
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

▲ For more details circle NED-804 F4 on enclosed inquiry slip ▲

"Kodak Photorecording Papers and Films . . . how to pick the one you need"

That's the title of a folder we recently published.

It gives you the details about the broad range of photographic films and papers we produce for photorecording purposes, tells you which to use for the application you have in mind, lists the various spoolings and lengths available. If you use photorecording now, or plan to use it in the future, you should have a copy. Just write to:

Industrial Photographic Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

▲ For more details circle NED-805 F4 on enclosed inquiry slip ▲

WHEREVER RUBBER, PLASTIC OR FABRIC HOSES ARE USED

RELIANCE HOZ-FAS-NERS

SAVE TIME and MONEY

EATON MANUFACTURING CO.
RELIANCE DIVISION
OFFICES and PLANTS • MASSILLON, OHIO
Sales Offices
NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

For more details circle NED-806 F4 on enclosed inquiry slip

Stock arrives on bench-high line. Empty trays return on center line. Filled cartons move to banding, weighing and shipping without leaving conveyor.

METZGAR EQUIPMENT—PLUS METZGAR EXPERIENCE

- GRAVITY-WHEEL, ROLLER
- LIVE ROLLER
- POWER BELT—HORIZONTAL
- FLOOR-TO-FLOOR
- NYLO ROLL
- SWITCHES, CURVES

. . . gives you highest conveyor efficiency and steps up production tempo. Ask for suggestions. No obligation.

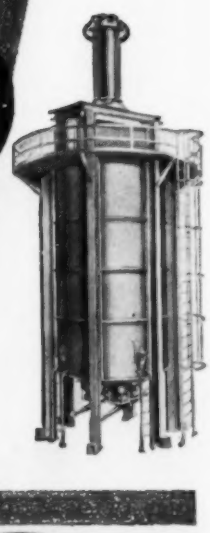
METZGAR CONVEYOR CO.
416 Douglas N. W.
MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES
GRAND RAPIDS 4, MICH.

For more details circle NED-807 F4 on enclosed inquiry slip

★ For Direct Heating of Liquids and Vapors

★ Indirect Heating Systems Using Circulating Medium

Struthers Wells
FIRED HEATERS
for the Process Industries



Struthers Wells direct fired heaters are available in sizes from 100,000 to 25,000,000 BTU per hour, for heating gasoline, oils or asphalts, superheating steam or gas, and for indirect heating systems.

Struthers Wells indirect heating systems give economical—trouble-free operation at temperatures to 750° F., or above.

If your process requires temperatures above those of existing steam supply—if steam is not available, or if the process can be improved by higher temperatures, investigate this simple and economical equipment.

Struthers Wells

STRUTHERS WELLS CORPORATION
Warren, Pa.
PLANTS AT WARREN, PA. • TITUSVILLE, PA.
Offices in Principal Cities

For more details circle NED-808 F4 on enclosed inquiry slip

HAND SPRAYER
with polyethylene container

Spray and needle jets are supplied with the No. 4 multipurpose hand sprayer, made with a chrome head and translucent polyethylene container. Developed for use with Spray White cleaner, the sprayer is trigger actuated. It is resistant to nearly all liquid sprays and holds 1 pint with visual indication of contents. Made by **Kelite Products, Inc.**, 1250 N. Main St., Los Angeles 12, Calif.

For more details circle NED-809 F4 on enclosed inquiry slip

PLUG-IN DELAY RELAY
delays range from ¼ to 120 seconds

Lightweight and compact, type F Silic-O-Netic time delay relay is available in standard delay periods from ¼ to 120 seconds. Plug-in unit is of hydraulic - magnetic silicone construction and is hermetically sealed against dust and moisture with an inert gas fill optionally available. Contacts have capacity of 3 amp at 120-v ac or 1 amp at 50-v dc with SPST through DPDT switching actions available. Pin or solder lug terminals are available. Made by **Heinemann Electric Co.**, 659 Plum St., Trenton 2, N. J.

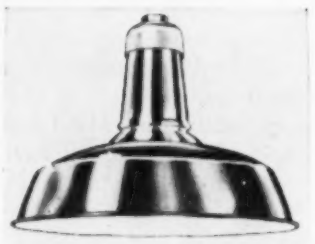
For more details circle NED-810 F4 on enclosed inquiry slip

ROLLER CAM FOLLOWER
cage is free-floating axially

Principle of Pitchlign bearing is incorporated in roller type cam follower to control position and direction of rollers at their pitch circle. Cage is held firmly in position by two shoulders. This support around periphery of cage reinforces it against any torque or wrenching action due to misalignment or irregular cam surfaces. Cage is free-floating axially so that it can float with rollers if thrust forces develop. Rollers are retained in channel raceway, the shoulders of which provide unbroken surface against any thrusting forces. Units can be used with or without inner races. Made by **Roller Bearing Co. of America**, Sullivan Way at W. Trenton Station, Trenton 3, N. J.

For more details circle NED-811 F4 on enclosed inquiry slip

LIGHT REFLECTORS
installation flexibility featured

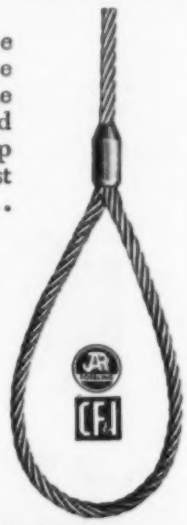


Key to flexibility of Duratach and Solid Neck light reflectors is that all reflectors are common to both lines and are adapted to form complete reflectors by single component part assembly. Units can be hung by basic pendant installation, with simple conversion to side outlet or outlet box. Left-handed threads on yoke and locknut of Solid Neck assembly permit complete fixture to be tightened on one operation. With Duratach unit, once lamp is screwed into socket body in reflector neck, complete assembly can be attached to canopy with upward pressure and slight twist. Both units are available with shock absorbing elements to cushion filament against excessive vibration. Standard bowl, angle bowl, deep bowl, shallow dome and elliptical angle models are offered. Made by **Wheeler Reflector Co.**, 273-285 Congress St., Boston 10, Mass.

For more details circle NED-812 F4 on enclosed inquiry slip

ALL-PURPOSE SLINGS

with new Roebling Tapered Sleeve Splice . . . stronger . . . cost less!



NEW ROEBLING All-Purpose Slings with the Tapered Sleeve Splice are delivered ready for the job. The unique rolled loops and tapered sleeve attachments develop full catalog strength of rope . . . cost less than ordinary tucked splices . . . save "splicing your own".

Made of Roebling "Blue Center" Steel Wire Rope, All-Purpose Slings are unsurpassed for toughness and dependability . . . flexible and easy to handle . . . come in all standard lengths and sizes. Send for full information and for the free "Sling Data Book." John A. Roebling's Sons Corporation, Trenton 2, New Jersey.

A subsidiary of The Colorado Fuel and Iron Corporation

ROEBLING

For more details circle NED-813 F4 on enclosed inquiry slip

the trade name of Elwell-Parker trucks has been streamlined to

ELPAR

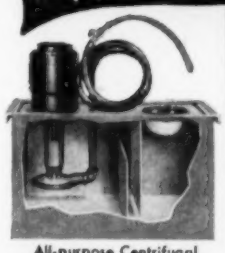
Only the trade name has been changed to Elpar. There will be no change in the ownership, management or policies of The Elwell-Parker Electric Company. We will continue to build industrial trucks with the same high quality and dependability.

THE ELWELL-PARKER ELECTRIC COMPANY
4094 St. Clair Avenue Cleveland 3, Ohio

For more details circle NED-814 F4 on enclosed inquiry slip

See how GRAYMILLS Coolant Pumps can help you

• convert to wet cutting or • replace worn out pumps



All-purpose Centrifugal Pump Unit No. H-2-3308A for 90% of machine tool applications

Gear Pump Unit No. SG1-4-25A Ideal for single spindle drill presses and small lathes

in a matter of minutes for increased production—improved quality — and longer tool life with your present machine tools.

If you need a larger volume of coolant, cutting oils, water, solvents, etc., at low pressures, the new improved Graymills Centrifugal coolant pumps are your answer. If you need higher pressures, for heavier liquids, a Graymills Gear type pumping unit will deliver from 1 to 3 GPM with pressures up to 100 PSI. Both types will give longer trouble-free service, efficient operation at a minimum of cost. Standard models in 1/25, ⅛, ¼ and ½ H.P. Various tank sizes and fittings.

All standard models stocked by leading Industrial Supply Distributors for immediate delivery — or write for catalog.

GRAY-MILLS

GRAYMILLS CORPORATION
3717 NORTH LINCOLN AVENUE • CHICAGO 13, ILLINOIS
WEST COAST: 4511 MELROSE AVE. • LOS ANGELES 29

For more details circle NED-815 F4 on enclosed inquiry slip

HART

CENTRAL LUBRICATION

for 1 to 32 points . . . assures maximum machine life . . . top productivity

HART Lubricators deliver exactly metered amounts of lubricant as needed, to all vital points. None is ever overlooked! A constant, controlled oil film reaches every bearing surface. Get greater production, lower repair bills and maintenance costs. Save time, save lubricant, eliminate the accident hazard of hand-oiling moving machines.

Economical HART Lubricators are precision built, give positive performance as original equipment or replacement. Wide choice of manual or automatic models for new and old applications.

Write today for literature. If desired describe equipment for recommendations.

Johnston EQUIPMENT AND SUPPLY CORP.
(Regional Distributors Strategically Located)
AFFILIATE OF HERRICK L. JOHNSTON ENTERPRISES
544 WEST POPLAR AVE., COLUMBUS 8, OHIO

▲ For more details circle **NED-816 F4** on enclosed inquiry slip ▲

WESTINGHOUSE PNEUMATIC CONTROL

reduces wear and tear on paper machine

• Thilmany Pulp and Paper Company, Kaukauna, Wisconsin, selected Westinghouse Air Brake Co. Pneumatic Control to assure smooth, shock-free operation of a new paper machine. Westinghouse Valves are used to precisely adjust pneumatic clutches and brakes on the dryer rolls, couch, presses, calendar, and reel.

Wherever you need precise control of linear motion—on brakes, clutches, small presses, positioning devices, sequencing mechanisms, and the like—investigate the possibilities of Westinghouse Pneumatic Control. Our engineers will be glad to help you. Just write, explaining your problem.

Westinghouse Air Brake COMPANY
INDUSTRIAL PRODUCTS DIVISION WILMERDING, PENNA.

Manufacturers of air compressors, pneumatic cylinders, actuators, air control devices of all kinds, engineered pneumatic control systems and front end loaders.

FACTORY BRANCH: Emeryville, Calif.
Distributors throughout the United States . . . See your classified directory.
Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

▲ For more details circle **NED-817 F4** on enclosed inquiry slip ▲

"Big timesavings"

WITH GREENLEE HYDRAULIC KNOCKOUT PUNCH DRIVER . . .

This timesaving tool . . . coupled with GREENLEE Knockout Punches . . . makes fast, easy work of enlarging knockouts or cutting entirely new openings for conduit up to 4". Operation is simple, *fast*. Over *eleven tons* of hydraulic ram force drive punches through 10-gauge metal with ease. Simplifies cutting holes in tight places, too . . . no wrench space needed. Write for complete details today.

TOOLS FOR CRAFTSMEN
GREENLEE

GREENLEE TOOL CO., 1946 HERBERT AVE., ROCKFORD, ILLINOIS

▲ For more details circle **NED-818 F4** on enclosed inquiry slip ▲

LIFT MAGNET

self-contained and battery operated

A 6-v automobile battery furnishes the lifting power for this self-contained lift magnet which has a capacity of 2000 lb of finished mild steel. It is operated by turning a switch on the recessed control panel. Dial which indicates the need of battery recharging and a receptacle for a trickle charger plug are also on the panel. Magnetized surface is 7 x 12½ in. The 120-lb unit has a lifting eye adapting it for use on cranes and other handling devices. A 4-amp battery charger for use on 110 v is available as extra equipment. Made by **Sundstrand Magnetic Products Co.,** 1022 Ninth St., Rockford, Ill.

▲ For more details circle **NED-819 F4** on enclosed inquiry slip ▲

FLOW CONTROL VALVE

meters flow in one direction

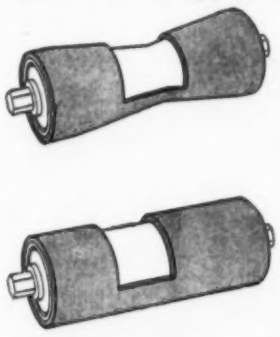
Flow of air at pressures up to 150 psi or oil or water to 300 psi is metered in one direction by the model 3620 flow control valve which also allows free flow in the opposite direction. Valve has an anodized aluminum body and a nylon poppet. Corrosion resistant adjusting screw has a slotted hex head which can be turned by wrench or screwdriver. Tightening on the opposite end locks the setting. The ⅜-in. valve is 3-in. long. Made by **Rivett Lathe & Grinder, Inc.,** Dept. NEP-2, Brighton 35, Boston, Mass.

▲ For more details circle **NED-820 F4** on enclosed inquiry slip ▲

CONVEYOR ROLLERS

with acid-resistant plastic cover

All standard sizes and shapes of conveyor rollers and wheels are now available with a Neoplastic covering which can be applied in any reasonable thickness.

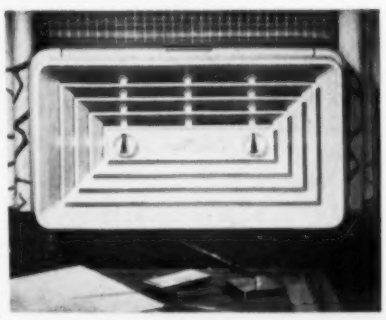


These rollers are intended for uses where a cushioning effect is required, or where articles handled have a finished surface which might be marred by contact with uncovered rollers. Covering is applied in liquid form in thicknesses normally ranging from ⅛-in. on small rolls up to ¼-in. on larger sizes. It is tough, abrasion-resistant and is unaffected by steam, hot or cold water, oil, grease, alkalies, acids and salts, and has Shore A2 durometer hardness of 70-75. It also withstands temperatures up to 200° F. Rollers are made by **Logan Co.,** 216 Cabel St., Louisville, Ky.

▲ For more details circle **NED-821 F4** on enclosed inquiry slip ▲

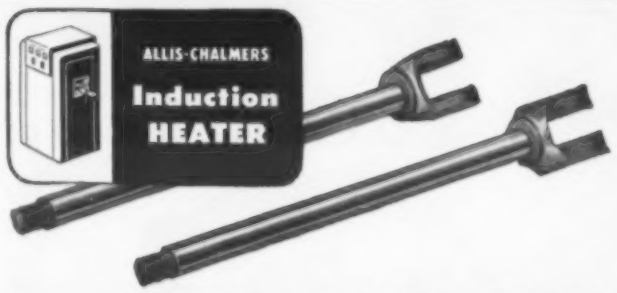
AIR CONDITIONER

mounts flush with window



No room space is taken up by this air conditioning unit which mounts flush with window. Jet cooling coil maintains maximum cooling under all conditions. Two fans operating in push-pull fashion increase intake and circulation of outside air for ventilation. Single "weath'r dial" provides seven levels of comfort. Units are available in ⅓, ½, ¾ and 1-hp sizes as well as 1½-hp unit for air conditioning large rooms and offices. Made by **Mitchell Mfg. Co.,** Dept. N-2, 2525 N. Clybourn Ave., Chicago 14, Ill.

▲ For more details circle **NED-822 F4** on enclosed inquiry slip ▲



Brazing Speed Up 800%

WHEN HIGH PRODUCTION Allis-Chalmers induction heaters replaced torch brazing methods in an aircraft plant, eight parts, like those above, were brazed in the time it formerly took for one.

In addition, percentage of rejects due to warpage was cut 80%. Reason? Heat is induced rapidly to uniform, accurately controlled depth. Center or core of metal remains relatively cool so expansion is minimized . . . warpage reduced.

VERSATILE, TOO! The two Allis-Chalmers induction heaters are used on a wide variety of jobs, including brazing piston rods on clevis assemblies, brazing caps on hydraulic ram cylinders, and case hardening bearing surfaces on hydraulic valve parts, connecting rods and others.

A simple change of work coils is all that's needed to change from one job to another.

Find out what Allis-Chalmers induction heaters can do to speed production, improve quality in your plant. Call your nearby Allis-Chalmers district office or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4172

ALLIS-CHALMERS

▲ For more details circle **NED-823 F4** on enclosed inquiry slip ▲

REPAIR CONCRETE PLANT FLOORS by SAWING BEFORE BREAKING

. . . with a **Clipper CONSAW**

Save up to 50% in labor and material. Saw repair patches—saw gas, water, conduit, and air line trenches in floors, runways and streets. Stops cracking and spalling—stops high maintenance costs.

. . . It's Yours on **FREE TRIAL**

Our Only Business for Nearly **20 YEARS . . . MASONRY and CONCRETE SAWING!**

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials and the "know-how" to put them together

. . . by the **MASONRY SAW Originators**

Every shape and size refractory **cut in seconds!** Perfect fitting reline jobs that last longer—cost less. A Clipper Model to fit any job—any budget. SOLD ON FREE TRIAL

MODEL HD 15 MODELS PRICED FROM $265

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH —SEE BELOW

CLIPPER SUPERIOR DIAMOND BLADES

. . . guaranteed to . . . "Consistently Provide the fastest cut . . . at the lowest cost . . . with the greatest ease!" Clipper alone can supply every necessary metal bond . . . in over 36 specifications.

Clipper MANUFACTURING CO.

• CINCINNATI • BOSTON • WASHINGTON, D.C. • CHARLOTTE, N.C. • PHILADELPHIA • CLEVELAND • ST. LOUIS • CHICAGO • HOUSTON • AUSTIN, TEXAS • SAN FRANCISCO • ATLANTA • DETROIT • PITTSBURGH • NEW YORK • BIRMINGHAM • DENVER • LOS ANGELES • INDIANAPOLIS • ST. PAUL • MILWAUKEE • DALLAS

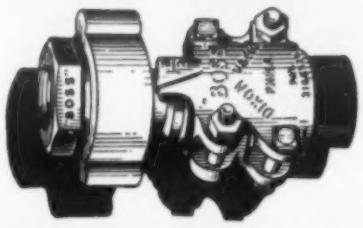
IN CANADA — P.O. BOX 476, WINDSOR, ONTARIO

TEAR OUT AND MAIL !

CLIPPER MFG. CO. Suite 401
2800 S. WARWICK • KANSAS CITY 8, MO.
Send FREE Literature and Prices on: 17C-1
☐ CLIPPER CONSAWS ☐ CONSAW DEMONSTRATION
☐ CLIPPER MASONRY SAWS ☐ CLIPPER DIAMOND BLADES
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle **NED-824 F4** on enclosed inquiry slip ▲

"BOSS"



WASHER TYPE FEMALE COUPLING STYLE W-16

For leakproof, durable connections on hose for every service—steam, air, gas, water, oil, butane, hydraulics—high or low pressure. Furnished with super-strong "Boss" Offset and Interlocking Clamps. All parts (except washer) steel or malleable iron, rustproofed. Deep corrugations on stem smoothly rounded to prevent damage to hose tubes. Sizes 1/4" to 6", inclusive.

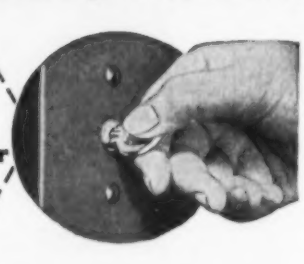
From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.

PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

For more details circle NED-825 F4 on enclosed inquiry slip

Safely locked the instant you close it...



BERGER
Key-Control Steel Locker

The first Steel Locker to offer "Automatic Safety"

This revolutionary steel locker actually has no handle. You open it with a key. And it prelocks automatically when the key is removed. Simply close the door—and forget about it. Your clothing, tools and other personal property always get full-time protection.

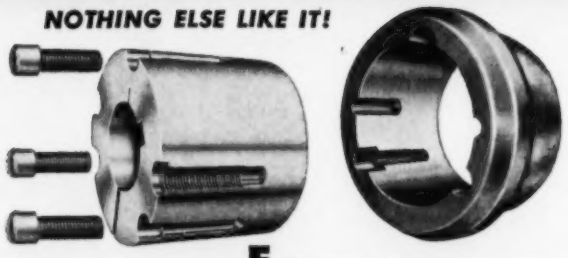
Key control cuts down noise, saves on handle maintenance too. Get all the facts from your Berger representative. Or write us direct. Remember: only Berger offers Key Control Steel Lockers—plus the largest selection of standard steel lockers.

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

For more details circle NED-826 F4 on enclosed inquiry slip

TAPER-LOCK
BUSHINGS WITH WELD-ON HUBS

NOTHING ELSE LIKE IT!



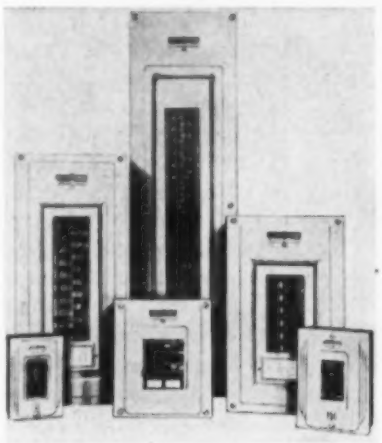
FOR your sprockets, gears, clutches, motors, impellors — for wheels of all kinds where service conditions are *really rugged*—there is nothing like TAPER-LOCK. This famous patented bushing—supplied for your use with matching TAPER-LOCK Weld-on Hub — gives you an easy-mounting, true-running unit that locks to the shaft with firmness equivalent to a shrunk-on fit. *WRITE* for special bulletin A-420A with specifications and entire range of shaft sizes (1/2" to 10").

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE
of Mishawaka, Ind.

For more details circle NED-827 F4 on enclosed inquiry slip

CIRCUIT BREAKER CENTERS handle up to 32 circuits



Thermal and magnetic trip are combined in Unit Breaker line of quick make - and - break circuit breaker load centers. They are made in six box sizes and seven breaker ratings for requirements up to 32 circuits. Breakers feature ambient compensation, two-position on-off lever movement, key hole mounting slots, ample knock-outs and generous wiring space. They are offered in single-pole units with 15 or 20-amp ratings and double-pole breakers with 15, 20, 30, 40 or 50-amp ratings. Made by **Cutler-Hammer, Inc.,** 312 N. Twelfth St., Milwaukee 1, Wis.

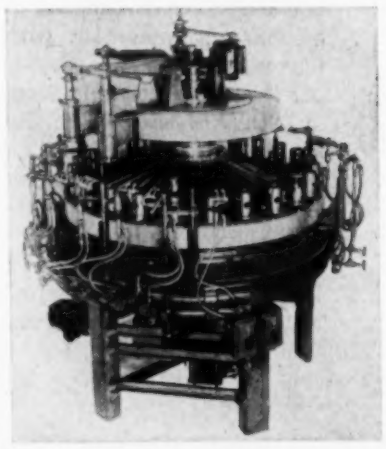
For more details circle NED-828 F4 on enclosed inquiry slip

OIL BATH AIR CLEANER is low resistance type for engines

Overall resistance in the range of 2 in. of water is provided by type P Cycoil oil bath air cleaner for engines using turbochargers or pressure blowers for scavenging. Intake air passes through holes in a plate inside the cleaner over which pumped oil is flooded. In subsequent filter stages entrained dust and sludge are separated out with the oil. Cleaner is made in eight sizes and capacity range from 1100 to 21,000 cfm. It is available in designs both for governed and full range engines and can be adapted for use as an evaporative cooler with water instead of oil. Both combinations of water-cooling and oil-filtering units and arrangements applicable to engines using aftercoolers are also made. Manufactured by **American Air Filter Co.,** 391 Central Ave., Louisville 8, Ky.

For more details circle NED-829 F4 on enclosed inquiry slip

GLASS WORKING MACHINE makes buttons for TV, radio tubes



Glass buttons with electric wires running through the glass are accurately molded by No. 23-24-B glass working machine. Buttons are used in TV and radio tubes, miniature and subminiature radio tubes, photo multipliers, transistors and similar vacuum and nonvacuum devices. Standard model has 24 rotating work holding fixtures on turret indexed by barrel cam. Gas burners are supplied for either hard or soft glass. Machine can also attach exhaust tube to center of button when required. It can be supplemented with automatic feeders for glass parts as well as lead through wires which often exceed 25 per button. Made by **Eisler Engineering Co.,** 753 S. Thirteenth St., Newark 3, N. J.

For more details circle NED-830 F4 on enclosed inquiry slip

Office Partitions

Aetna Steel Products Corp., Arnot-Jamestown Div. —16-page illustrated catalog shows some of the alternative layouts possible with steel Partitionettes or office enclosures. Different available types are illustrated, including units with clear and frosted glass top divisions, desk height units, and others. Screwdriver is only assembly tool needed, and built-in leveling device is incorporated.

For more details circle NED-831 F4 on enclosed inquiry slip

NOW! Shear strength *twice* that of any other fastener!

NEW Lion "Hi-Strength" design fills every need for parts that must be fastened, taken apart, buttoned tight quickly

(Top) New Lion "Hi-Strength" fastener assembled. *(Inset)* Beveled counter sink which increases area over which stress is distributed

Here's a new and better answer to your problem of metal-to-metal fastening where high shear stress and vibration are factors.

It's the Lion "Hi-Strength" fastener, combining speedy quarter-turn opening and closing with a shear strength of 4750 lbs!

This "Hi-Strength" fastener is remarkably strong because shear load is evenly distributed over the area of the fastened parts. The secret lies in the *beveled* counter sink in the sheet and the nut.

In addition to high shear strength, its tensile strength is 3000 lbs. Sheet separation is zero up to 4750 lbs. Misalignment is as much as .125 with high shear qualities. Regardless of the number of times it's opened or closed, there is no wear. It cannot be overtorqued (up to 3750 lbs.). It cannot be fastened incorrectly. It is no larger than a standard No. 5!

To test it yourself, write for a free mounted working sample. Just drop us a line on your company letterhead.

LION FASTENER, INC. 600 Main St., Honeoye Falls, N. Y.
In Canada: A. T. R. Armstrong Co., 50 St. Clair Avenue West, Toronto

For more details circle NED-832 F4 on enclosed inquiry slip

*** ALBION'S *NEW* CADMIUM PLATED ABRADED CASTERS**

Now . . . a *new look* for industrial casters, Albion's Cadmium Plated and surface-abraded casters offer a life-long, rust proof finish that *never* requires painting.

Top plates, yokes and thrust buttons have smooth, satin-like silver finish as tough as the metal itself. They look clean, stay clean and improve the appearance of your product or equipment.

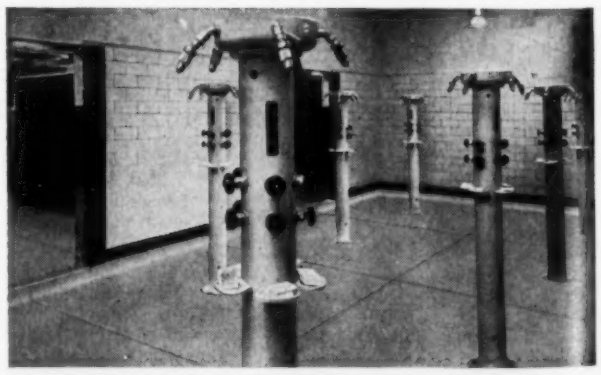
The CPA* finish is available in practically all Albion Industrial Caster series, both rigid and swivel models . . . *at no additional charge!*

So, if you want the finest of industrial casters and appearance as well, be sure to specify Albion's new CPA* finish on your next order.

Represented in Canada: C. J. McDONALD
Rear 1564 Queen St. W., Toronto

ALBION INDUSTRIES, inc.
ALBION, MICHIGAN

For more details circle NED-833 F4 on enclosed inquiry slip



THEY SELECTED BRADLEY COLUMN SHOWERS

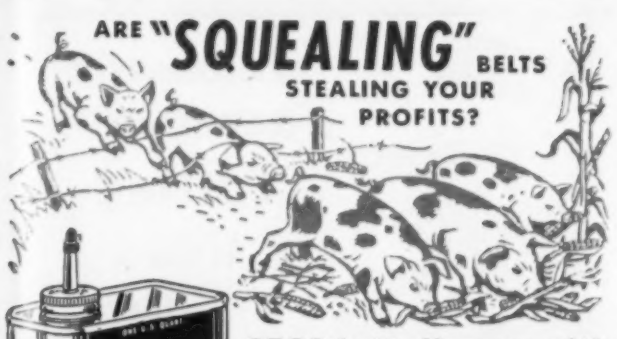
Without the usual partitions of the 3-stall or 5-stall Bradley Showers, the Column Showers are otherwise complete with drain fittings, sprayheads, soap trays, mixing chamber for temperature control with hot and cold water control valves. Ready to install.

Floor space is saved and by placing Showers away from walls, wall water-proofing is not required and space may be used for lockers and benches.

Here's the answer to your Shower requirements at low cost. Write for Catalog 4701-CS. BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan Street, Milwaukee 1, Wisconsin.

BRADLEY Showers
Distributed through Plumbing Wholesalers

For more details circle NED-834 F4 on enclosed inquiry slip



For ALL types of belts—V-Type, Flat or Round. More than 110,000 users.

STOP belt slippage with

BELTRACTION

LIQUID BELT TREATMENT

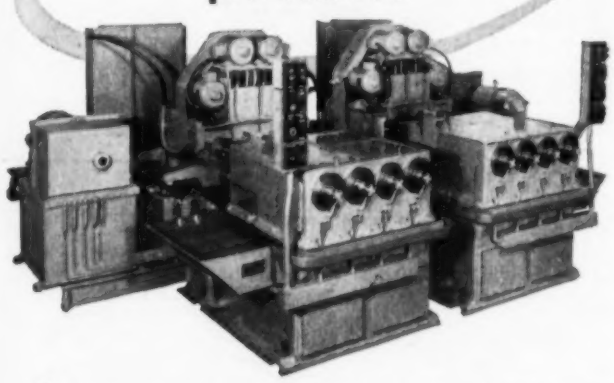
If your belts squeal when power is put on under load, they are slipping. Slipping belts mean lost production — lost profits. BELTRACTION stops slippage and increases production, assuring smoother operation at lower cost. Increase profits with BELTRACTION. Write for folder which gives results of tests by independent laboratories.

BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

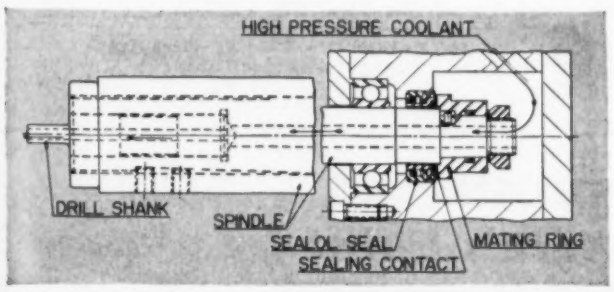
FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

▲ For more details circle NED-835 F4 on enclosed inquiry slip ▲

How the SEALOL Seal solved a machine design problem . . .



This Krueger-Barnes gun drilling machine is designed for drilling accurate holes to extreme depths. The problem in the gun drilling operation is to get coolant under great pressure to the point of the drill, for cooling, for lubrication, and for chip removal . . . and Sealol helps solve the problem.



The sketch shows the Sealol Seal which makes it possible to keep the coolant flowing to the gun drill under pressures as high as 1,000 psi. Sealol's engineering staff worked in close cooperation with Krueger-Barnes Corporation, adapting proven Sealol mechanical shaft sealing designs to the special conditions of the gun drilling operation.

This designed-in seal is typical of the high-capacity performance obtainable with Sealol Seals. May we help with your shaft sealing problems? Send job description, or write for Bulletin 7 — the complete story on Sealol Balanced Pressure Seals. Sealol Corporation, 47 Willard Avenue, Providence 5, Rhode Island. New York City, Chicago, Cleveland, Los Angeles, San Francisco, Houston, Philadelphia, Kansas City (Mo.), Charleston (W. Va.), St. Louis, Tulsa, Edmonton-Toronto, Canada.

REPRESENTATIVES—SOME TERRITORIES OPEN

SEALOL
THE BALANCED PRESSURE SEAL

▲ For more details circle NED-836 F4 on enclosed inquiry slip ▲

SYPHON TYPE PUMP redesigned, handles various liquids

Designed to pump water or other liquids, redesigned series 5 steam ejector pump is now available fabricated from bronze, stainless steel or abrasion-resistant metals. Pump operates by passing steam through a venturi where it produces a suction effect on the liquid being pumped. It will lift liquids approximately 1 ft for each pound of steam pressure applied. Eight models make up the line, with capacities ranging from 250 to 15,000 gph. Powered also by water and air pressure, other units are available for such purposes as exhausting air and priming pumps, deep well pumping and bilge-type pumping. Made by **Blakeslee Mfg. Co.**, Yards Rd., Salem, Ill.

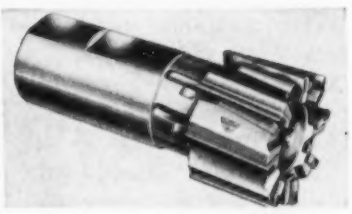
▲ For more details circle NED-837 F4 on enclosed inquiry slip ▲

PORTABLE POWER SAW features reciprocating blade

Versatility of a hand saw is combined with the speed of power sawing in this portable power saw. An 18-in. reciprocating blade connected directly to a gasoline engine fells trees, saws heavy timbers and cuts posts and piling. It can also be used for such precision work as trimming, notching and ripping lumber. Saw will follow a chalk line, cuts a 3/16-in. kerf and leaves a mill surface on the wood. It weighs less than 25 lb. Float type carburetor with wick feed permits operation of saw in any position. The trigger type throttle automatically shuts off the saw when it is released. The blade can be changed in ½-minute without tools, and resharpening is by hand. Made by **Wright Power Saw & Tool Corp.**, 294 Longbrook Ave., Stratford, Conn.

▲ For more details circle NED-838 F4 on enclosed inquiry slip ▲

STRAIGHT SHANK END MILLS utilize serrated inserted blades



Line of straight shank heavy duty carbide blade end mills includes a series for milling cast iron and nonferrous materials and another for milling steel. Mills have 2-in. diameter shank and cutting faces ranging from 2 to 4-in. diameter. Inserted blade construction incorporates Serratip blades which consist of thick carbide blank brazed to metal backing thick enough only to provide serrated surface. Blade adjustment allows 5/16 to ½-in. effective tool and grinding life on diameter. Wedge lock holds blades securely in body. Made by **Goddard & Goddard Co.**, 12284 Burt Rd., Detroit 23, Mich.

▲ For more details circle NED-839 F4 on enclosed inquiry slip ▲

TELESCOPING CYLINDER designed for oil power only

Application for which this telescoping cylinder was originally designed required two such units to move the main cylinder and ram of a pull-down hydraulic press to different points above work table and hold it there for an indefinite period without dropping. Component cylinders making up the unit are alternately Meehanite metal and steel and are equipped with O-rings. At 1000 psi, first sleeve has 15,900-lb lift and 6⅝-in. travel; second sleeve, 8295-lb lift with 6⅜-in. travel; and third, 3976-lb lift with 6⅛-in. travel. Shut height from eye to eye is 14 in. and fully extended height is 33⅛ in. Larger and longer cylinders can be made to customer requirements by **Greenerd Arbor Press Co.**, Lock Box X-415, Nashua, N. H.

▲ For more details circle NED-840 F4 on enclosed inquiry slip ▲

New ½" DRILL

Heavy-duty power (6 amp motor) at standard-duty price . . . Only $60.

Model 516

— the most powerful cutting action of all heavy-duty drills in its price class — actually 45% to 68% greater staying power on toughest drilling jobs.

• Precision ball bearings throughout, and Helical 1st-stage gearing minimize friction and power loss.

• Removable, adjustable spade handle and 2-position auxiliary handle allow greater pressure in confined work areas.

• Weighs only 10 lbs.

ALSO NEW: Model 515 heavy duty ¼" Drill: 3 amp motor, ball bearings throughout, weighs 3¾ lbs., $44.50. Write for complete details and name of nearest dealer.

Porter-Cable
Quality Electric Tools

PORTER-CABLE MACHINE CO.
2406 N. Salina St., Syracuse 8, N. Y.

▲ For more details circle NED-841 F4 on enclosed inquiry slip ▲

G-E CLF FUSES

Greater Protection from Short Circuits and Resultant Let-through Energy

General Electric high-interrupting-capacity fuses, Type CLF, provide efficient and economical short-circuit protection for feeders, branch circuits, motor starters, control power circuits, and similar low-voltage applications where conventional NEC fuses do not have sufficient interrupting capacity. General Electric CLF fuses not only isolate faulty apparatus or circuits before other elements in the system are affected, but they protect the devices from let-through energy associated with short circuits.

External dimensions meet requirements of National Electrical Code and Underwriters' Laboratories, Inc., "Standard for Fuses." Type CLF fuses are available in both 250 volts and 600 volts with ampere ratings of 6, 15, 20, 30, 40, 60, 80, 100, 150, and 200.

For more information write Section D-128-661, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

You can put your confidence in—

GENERAL ELECTRIC

▲ For more details circle NED-842 F4 on enclosed inquiry slip ▲

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each
gives up to 2000 readings

it's this simple:
• Select the Tempilstik° for your working temperature.
• Mark your workpiece with it.
• The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION—Technical Dept.
132 West 22nd Street, New York 11, N. Y.

PLEASE SEND FREE—Tempil "Basic Guide to Ferrous Metallurgy"—16½" x 21" plastic-laminated wall chart in full color.

NAME _____
COMPANY _____
ADDRESS _____

▲ For more details circle NED-843 F4 on enclosed inquiry slip ▲

SHEEHAN
METAL MESH BELT
CONVEYORS
for Quenching

SHEEHAN Conveyors are tried and proven in the field to give longer quenching time, and more efficient performance to fit *YOUR* particular needs. Use SHEEHAN Conveyors with *confidence* . . . because they are practically *maintenance-free.* Inquire today why SHEEHAN Conveyors do the job right with the SHEEHAN positive drive, spike-studded pulley feature.

Adaptable to any shape tank

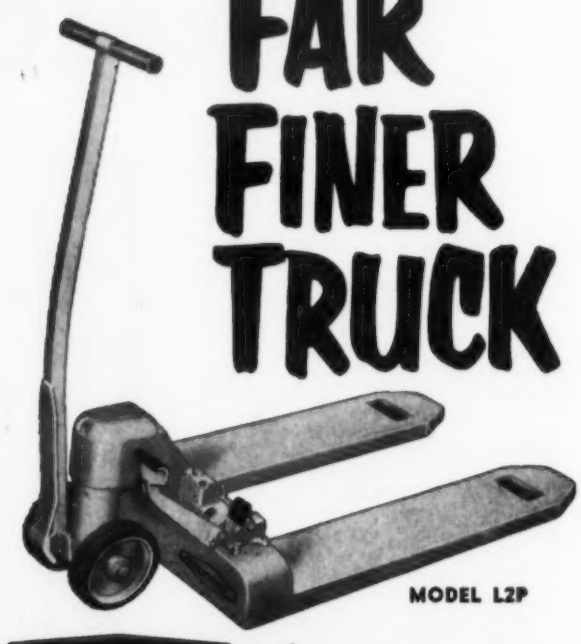
YOUR PROBLEMS! — May we analyze your conveyor problems? Complete engineering "Know How" available. Sheehan Conveyor users have saved thousands of dollars in floor space, material handling and manpower. There's a SHEEHAN Conveyor for most industrial use.

R. T. SHEEHAN CO.
8036 N. Territorial Rd. • Plymouth, Michigan

▲ For more details circle NED-844 F4 on enclosed inquiry slip ▲

For a few dollars more, you get a

FAR FINER TRUCK



MODEL L2P

RAYMOND *Lightweight*
PALLET LIFT TRUCK

● When buying a lift truck, don't be guided by price alone. Remember . . . performance is far more important. The RAYMOND Lightweight Lift Truck, for example, costs slightly more than similar trucks . . . yet there's a vast difference in how long and how well it performs!

● This 2,000-lb. capacity truck is constructed of only the finest materials, backed by 30 years of manufacturing skill. Nowhere in this RAYMOND Truck is quality compromised. The result is a rugged lift truck offering all these outstanding features:

ONE-PIECE WELDED FORKS . . . ⅓ times stronger than bolted fork construction.

CHROME PLATED PUMP PISTON . . . prevents leakage, prolongs pump life.

STRONGER CONSTRUCTION . . . heat-treated alloy steel ram pistons, axles, lever shafts.

HIGHLY MANEUVERABLE — FOOT PEDAL OPERATED
EFFORTLESS PALLET ENTRY — REINFORCED HANDLE
THOROUGHLY LOAD TESTED — DUAL PURPOSE BRAKE
FACTORY ADJUSTED LINKAGE — LIGHTWEIGHT

● *Mail This Coupon*

The RAYMOND CORPORATION
4123 Madison St., Greene, N.Y.

Please send me Bulletin 207, describing your 2,000-lb. capacity Lightweight Lift Truck, as well as your 4,000 and 6,000-lb. capacity Lift Trucks.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle NED-845 F4 on enclosed inquiry slip ▲

New Literature and Catalogs

Glass Pipe & Fittings

Sentinel Glass Co.—Illustrated specifications folder of 4 pages covers Pyrex small diameter glass pipe and special fittings for use in process piping, pilot plant piping, sampling lines and instrumentation. Flanged pipe, 45 and 90-degree elbows, U-bends, tee's, return bends, crosses, laterals, caps and reducers are illustrated with dimensions.

▲ For more details circle NED-846 F4 on enclosed inquiry slip ▲

Fluorescent Lamp Disposal Unit

Laduby Co.—Safe destruction and disposal of all size fluorescent lamps and up to 300-w incandescent lamps is function of Flur-O-Lamp disposal units described and illustrated in 8-page catalog F.L. 800. Lamps are ground into tiny pieces under water. Also described are Flur-O-Locks which keep lamps equally spaced between sockets and in good electrical contact.

▲ For more details circle NED-847 F4 on enclosed inquiry slip ▲

Alloy Steel Set Screws

Mac-it Parts Co.—36-page well-illustrated catalog No. 50 covers a complete line of alloy steel set screws, Types include hex socket screws in various head and shoulder designs, square head, tool post, slotted headless, stud, machine and cap screws. Complete data are given on physical characteristics, and ASA dimension standards are included.

▲ For more details circle NED-848 F4 on enclosed inquiry slip ▲

Heat Transfer Coils

Tranter Mfg., Inc.—Platecoil heat transfer equipment for heating and cooling applications is described and illustrated in brochure No. 154. Twelve different applications are described in detail, with performance analyses and cost comparisons. Equipment has comparatively large heat transfer area.

▲ For more details circle NED-849 F4 on enclosed inquiry slip ▲

Solenoid Valves

J. D. Gould Co.—Designed for automatic control of steam, air, gas or liquid flow, various solenoid valves and applications are described in 4-page illustrated bulletin 500A. Models range in size from ¼ to 3 in., and handle pressures up to 1200 psi. Water and oilproof designs for high temperature service are also shown.

▲ For more details circle NED-850 F4 on enclosed inquiry slip ▲

Steel Plate Floors

Flash-Stone Co.—16-page illustrated catalog describes Ancor rolled steel plate floors. Design permanently interlocks the steel plates with a concrete base, giving durability even under the most arduous working conditions. Installation procedures are shown. Design prevents buckling, curling and cracking.

▲ For more details circle NED-851 F4 on enclosed inquiry slip ▲

Pilot & Small Lamp

Dialight Corp.—24-page illustrated catalog L-154 covers bracket-mounted sockets for small lamps and other electrical equipment. Double-contact bayonet base, candelebra and intermediate screw, miniature screw and miniature bayonet socket types are shown with various options of soldering terminals and wire leads. Different types of brackets are also shown.

▲ For more details circle NED-852 F4 on enclosed inquiry slip ▲

Power Plant Communication Systems

Radio Corp. of America, Sound Products Section, Engineering Products Dept.—16-page illustrated catalog gives details of power plant communication systems permitting fully intelligible plant-wide coverage. Custom-engineered installations are described in detail and such system components as handsets and speakers are also illustrated.

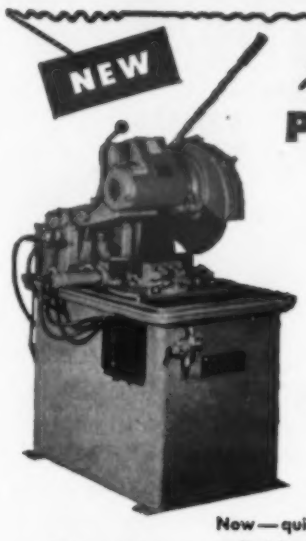
▲ For more details circle NED-853 F4 on enclosed inquiry slip ▲

Engineered Vibrating Screens

Productive Equipment Corp.—Engineered to meet individual separating and grading needs in process industries are the Selectro vibrating screens described in 8-page bulletin 744. Units are made in full range of sizes from 18 x 14 in. to 48 x 120 in. Dewatering units can also be supplied in open or closed models.

▲ For more details circle NED-854 F4 on enclosed inquiry slip ▲

NEW



Automatic
POWER-FED Cutting Head
for STONE Model M-75

ONE SIMPLE LEVER FOR AUTOMATIC CUTTING

You Save up to 25% on wheel costs with power feed!

Now—quicker—safer—cutting with controlled feeds, gives even greater efficiency to Stone High-Speed cutting equipment. The automatic feed improves the quality of cut, eliminates operator fatigue, increases production rates and increases wheel life.

AVAILABLE AS OPTIONAL EQUIPMENT ON NEW MACHINES OR AS SEPARATE UNIT FOR INSTALLATION ON PRESENT MACHINES.

Write Today For Complete Information

STONE MACHINERY CO., INC.
Fayette St. Manlius, N.Y.

▲ For more details circle NED-855 F4 on enclosed inquiry slip ▲

what are your hardness testing needs?

portability? The Newage Tester is only 3" high, weighs 30 ozs.!
versatility? Tests any size, shape, type metal!
speed? 1 easy motion gives direct reading!
ease to use? Just press handgrips, read dial. No conversion charts, no calculations!
production? Make a test a minute with the bench adapter!

Each instrument is individually calibrated. Available in Newage Scales corresponding to:

Rockwell "A" 35-75 Scale
Rockwell "B" 5-100 Scale
Rockwell "C" 6-70 Scale
Rockwell "15N" 70-95 Scale
Brinell Medium 100-440 Scale
Brinell Low 50-260 Scale

ERNST PATENT #2536632.

Thousands in use in industry, labs, government agencies. Write today for full descriptive literature, Booklet 604

NEWAGE INTERNATIONAL portable metal hardness testers
NEWAGE INTERNATIONAL, INC., 235 E. 42 ST., N.Y., N.Y.

LOS ANGELES: 11775 SAN VICENTE BOULEVARD
TORONTO 14, ONTARIO: NEWAGE (CANADA) LTD. 3 BESTOBELL RD., QUEEN ELIZABETH WAY

▲ For more details circle NED-856 F4 on enclosed inquiry slip ▲

ENGINEERS Here's Help!

If you are:
● Recording
● Controlling
● Measuring
Temperature and/or Pressure

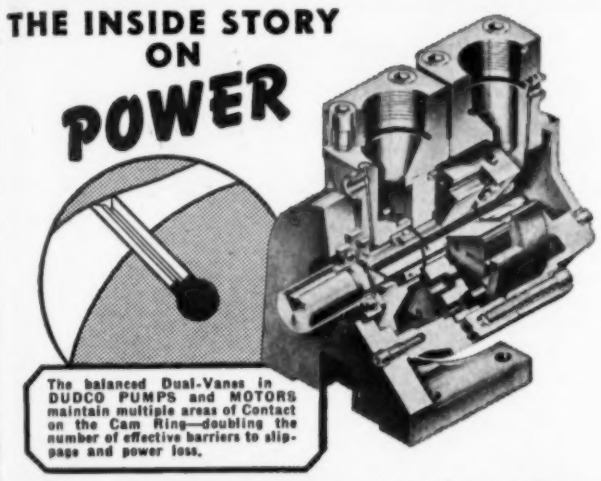
These four big catalogs will help you to select the right Gotham Instrument for your application. They are yours for the asking. Just write today on your business letterhead. Our engineers will be happy to help you solve special instrumentation problems without obligation.

Keep Everything Under Control With Gotham
GOTHAM INSTRUMENTS
Division of American Machine and Metals, Inc.
Dept. 1, 233 Broadway, New York 12, N.Y.

▲ For more details circle NED-857 F4 on enclosed inquiry slip ▲

1ST IN METAL TOOL BOXES
CASES—CHESTS—CABINETS
Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.
WATERLOO METAL BOXES AND CHESTS
Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA
For more details circle NED-858 F4 on enclosed inquiry slip

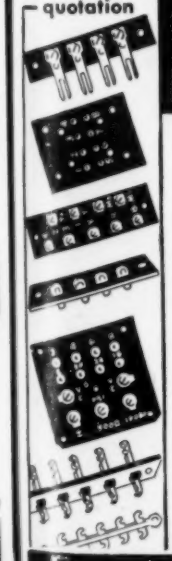
THE INSIDE STORY ON POWER



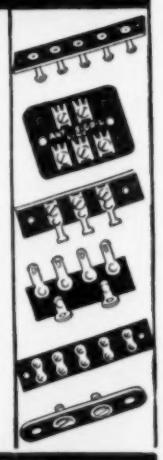
Bulletin No. DP-300 Gives You the FACTS on DUDCO DUAL-VANE HYDRAULIC PUMPS
DUDCO Vane Type PUMPS feature the exclusive Dual-Vane principle because it is the key to complete hydraulic balance and the elimination of excessive slippage and power loss. With single models of 3 to 60 gpm and double models with capacities from 24 to 120 gpm, DUDCO Pumps afford design engineers the advantages of equipment providing continuous pressures to 2000 psi.
WRITE for BULLETIN DP-300 . . . profusely illustrated . . . tells the entire story.
DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.
For more details circle NED-859 F4 on enclosed inquiry slip

Send your specifications for prompt quotation

Hundreds of standard
JONES TERMINAL PANELS
Complete Equipment FOR SPECIALS



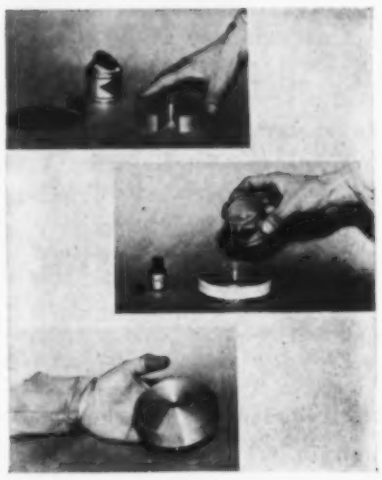
Several pages of Jones Catalog No. 16 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices, without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.
JONES MEANS Proven QUALITY



Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.
For more details circle NED-860 F4 on enclosed inquiry slip

New Processes and Materials

METALLIC RESIN FILLER adheres strongly to metals

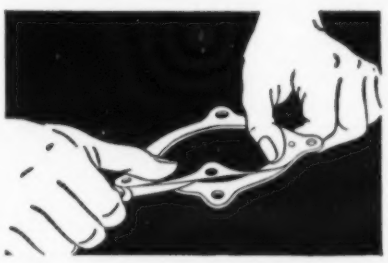


Useful for repairing castings, filling joints in sheet metal and building up surfaces of patterns, molds and dies, Metalset epoxy resin compound adheres strongly to metals. Since it hardens by polymerization following addition of a curing agent, it can be applied in any thickness without shrinkage or cracking. Compound is hard and tough, has good chemical stability and can be machined to a feather edge. It cures in a few hours at room temperature and at accelerated rates if moderate heat is applied. Compound is easily applied with spatula or other similar hand tool. It is noncombustible and can be stored indefinitely. Cans containing 6-oz and 1½ and 3-lb quantities are available, each with the proper amount of curing additive. Made by **Smooth-On Mfg. Co.**, Dept. NE, 570 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-861 F4 on enclosed inquiry slip

SHIM STOCK made of laminated aluminum

Laminations from which this aluminum shim stock is made are bonded over the entire surface. They will peel for adjustment in the same way as the company's brass and steel shims. Material is light in weight and corrosion and electrolytic-action resistant. It is available either custom stamped to blueprint specifications or as laminated sheet stock in thicknesses from 0.015 to 0.125-in. and in sizes to 20 x 48 in. Made by **Laminated Shim Co.**, Glenbrook, Conn.



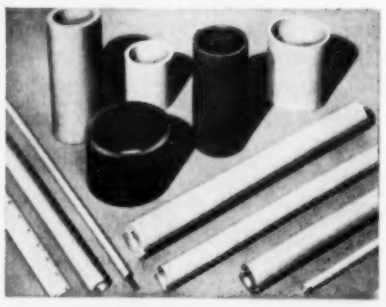
For more details circle NED-862 F4 on enclosed inquiry slip

CASTING & LAMINATING RESIN is low temperature curing type

Designed for use in casting, potting and laminating, Epocast 111 epoxy resin can be cured in 1 to 3 hours at temperatures in the 150 to 200° F range. It is cured without use of toxic hardeners and has good cured heat resistance. It is transparent, with a yellow caste and has a shrinkage of less than 1 per cent. It can be blended with large volumes of fillers to give attractive color transparencies. Resin has good electrical and physical properties and water resistance. Made by **Furane Plastics, Inc.**, Dept. ND, 4516 Brazil St., Los Angeles 39, Calif.

For more details circle NED-863 F4 on enclosed inquiry slip

PRECISION CERAMIC CYLINDERS available up to 30 in. long

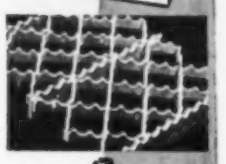


Hard alumina, titania and other ceramics are now available in form of cylinders held to 0.0001-in. tolerances up to 30 in. long and 6-in. diameters. If desired, they can be supplied mounted, precision ground and accurately centered on steel shafts. Properties include corrosion and wear resistance, ability to withstand high temperatures and thermal shock and nonmagnetic and superior electrical insulating characteristics. Made by **American Lava Corp.**, 510 Kruesi Bldg., Chattanooga 5, Tenn.

For more details circle NED-864 F4 on enclosed inquiry slip

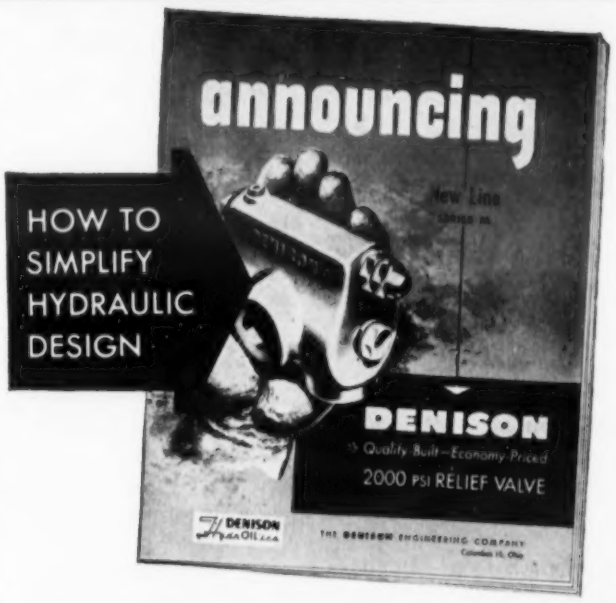
Compare This Positive Footing Multi-Feature "Safety Grating"
CUTS DOWN ACCIDENTS
ELIMINATES DANGER SPOTS
IMPROVES EFFICIENCY

Bustin
FIRM-GRIP
SAFETY GRATING



Help Yourself in your effort to eliminate skidding accidents.
Try BUSTIN FIRM-GRIP.
This recently developed unique "Safety Grating" has proven to safety engineers of major industrial concerns across the continent its unusual value in eliminating accidents.
*Pat. Pending

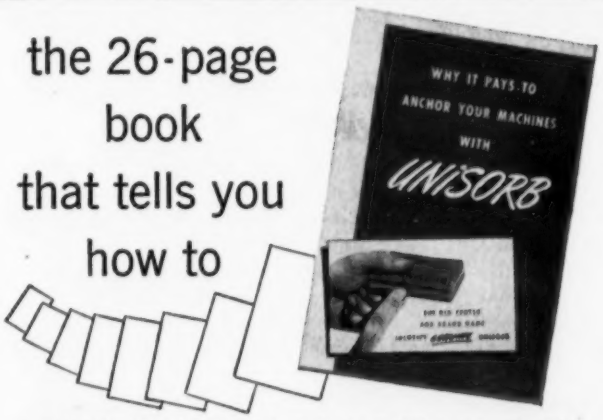
Bustin
Write for Complete Literature
FIRM-GRIP GRATING CORP.
Dover, New Jersey Dover 6-8800
"BUSTIN—Designers and Manufacturers of Metal Products Since 1928"
For more details circle NED-865 F4 on enclosed inquiry slip



Just out. Free Bulletin No. 152 gives operating characteristics, capacities, sizes and dimensions for new line of low-priced Denison Series M Relief Valves for pressures to 2000 psi. Write for it today.

THE DENISON ENGINEERING CO.
1151 DUBLIN ROAD • COLUMBUS 16, OHIO
LEADING DESIGNER AND MANUFACTURER OF HYDRAULIC PRESSES AND COMPONENTS
For more details circle NED-866 F4 on enclosed inquiry slip

the 26-page book that tells you how to

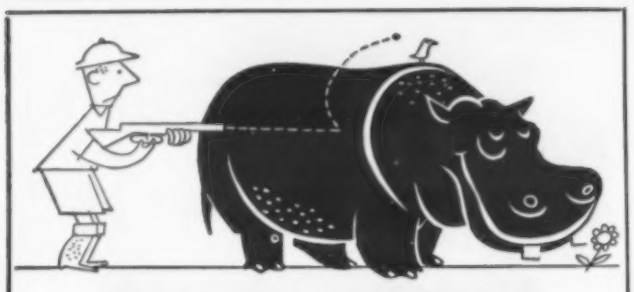


- ANCHOR MACHINES and eliminate 60-85% of transmitted vibration
- ELIMINATE DRILLING of wood or concrete floors when installing machines
- SAVE TIME and money (up to 30%) on installation costs

For your copy of this valuable book, showing actual plant installations of UNISORB®, return the coupon today.

the FELTERS company
224 South Street, Boston 11, Mass.

Please send me a copy of FACTS ABOUT ANCHORING YOUR MACHINES WITH UNISORB, at no obligation to me.
Name.....Title.....
(Please print)
Company.....
Address.....
City.....Zone.....State.....
Return to: The Felters Co., 224 South St., Boston 11, Mass.
For more details circle NED-867 F4 on enclosed inquiry slip



BB'S CAN'T PENETRATE HIPPO-HIDE!

—and weld spatter can't penetrate P.O.M. When you apply P.O.M. No. 2 to weld seam and adjacent metal you get better, cleaner welds and all spatter wipes off with a dry rag! Protect-O-Metal does not cause smoke or fumes, goes on in a hurry, saves as much as 85% of weld cleaning time and labor. Use P.O.M. No. 8 for rust prevention as well as spatter protection. Order trial gallons of both No. 2 and No. 8. Satisfaction guaranteed or we'll cancel the invoice.

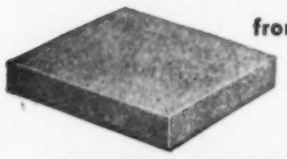
PROTECT-O-METAL POM G.W.SMITH

G. W. SMITH & SONS, INC., 5406 Kemp Road, Dayton, O.

For more details circle NED-868 F4 on enclosed inquiry slip

Armstrong's

VIBRACORK CUSHIONS VIBRATION



from Hydraulic Presses, Pumps, Compressors, and many other types of Machinery and Equipment

. . . ACTUALLY FLOATS THE LOAD ON MILLIONS OF AIR CELLS!

Vibracork is a resilient machinery isolation cork plate made of pure cork granules, compressed and baked under pressure.

Convenient to stock — Standard sheets, 12" x 36"; Standard density 2" and 3" thick; Heavy density, 1", 2" and 3" thick.

Easy to use — Can be cut to size on the job with an ordinary hand saw.

Loading range — Standard density, 1500# to 4000# per. sq. ft.; Heavy density, 5700# to 8500# per. sq. ft.

Availability — Immediate delivery. Korfund is sole distributor for the United States.

For installation data and further information, ask for Bulletin VC-500.

THE KORFUND CO., INC.

KORFUND VIBRATION CONTROL — SPRINGS RUBBER CORK

48-35P Thirty Second Place • Long Island City 1, N. Y.

For more details circle NED-869 F4 on enclosed inquiry slip

EXACT WEIGHT Scales

Give Accurate Readings FAST, Eliminate Costly Over-weights

EXACT WEIGHT Scales increase production two ways. Short lever fall plus the action of an adjustable damping device bring scale indicator to rest quickly —and magnified indication makes possible an accurate reading at a glance. In addition to the saving in time, you make an important saving by the elimination of over-weights. EXACT WEIGHT's end-tower models are compactly built to occupy minimum counter space, with clear visibility of the indicator. Weigh accurately in out-of-level position. Available in a wide range of capacities to fit your needs exactly.

Exact Weight Scales

Better quality control

Better cost control

THE EXACT WEIGHT SCALE COMPANY

930 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St. W., Toronto 18, Canada

For more details circle NED-870 F4 on enclosed inquiry slip

New Literature & Catalogs

Heat Exchangers

Taco Heaters, Inc. — 36-page illustrated catalog No. 533012 covers a complete line of commercial and industrial heat exchangers and heaters. Condensate coolers, fuel oil heaters and other specialized units are also illustrated and described. Steam requirement calculation formulas are among the engineering data provided.

For more details circle NED-871 F4 on enclosed inquiry slip

Panelboard Planning

Westinghouse Electric Corp.—Planning commercial and industrial circuit-breaker panelboards is discussed in 16-page booklet B-6098. Advantages of De-ion circuit breakers and of the dead-front breaker panel to both user and contractor are covered as well. Line of panelboard equipment is described, and new specifications are suggested.

For more details circle NED-872 F4 on enclosed inquiry slip

Load-Measuring Instrument

W. C. Dillon & Co.—8-page illustrated folder No. 25E covering the Dynamometer load indicating instrument gives specifications for standard models and also illustrates many applications. Force measuring gages are available in a wide variety of capacity ranges between 0 to 500 and 0 to 100,000 lb.

For more details circle NED-873 F4 on enclosed inquiry slip

Cam Clutches

Morse Chain Co.—Series 200 Morse cam clutches for indexing, over-running or free-wheeling and backstop machine drive applications are featured in 4-page descriptive piece C12-54. Application data, installation drawings and table of specifications are given for seven models having torque ratings from 10 to 500 lb ft and ground outside diameters corresponding to standard 200 series ball bearings in nominal sizes from 1½ to 3½ in. OD.

For more details circle NED-874 F4 on enclosed inquiry slip

Small Hole Tapping Machine

Hamilton Tool Co.—Precision small hole tapping machine described and specified in 4-page bulletin T-54 has capacity from smallest and finest tap to 10-32 inclusive. To facilitate centering, spindle idles in reverse and changes direction of rotation automatically as pressure is applied to tap.

For more details circle NED-875 F4 on enclosed inquiry slip

Air & Hydraulic Cylinders

Petch Mfg. Co.—32-page loose-leaf catalog presents specifications and engineering data regarding air as well as high and low pressure hydraulic cylinders. Air and low pressure hydraulic units range in size from 1½ to 10-in. bore and high pressure hydraulic models from 1½ to 6 in.

For more details circle NED-876 F4 on enclosed inquiry slip

Coil Winding Machines

Geo. Stevens Mfg. Co.—Practically every kind of coil, including toroidal, transformer, bobbin, repeater, solenoid, resistor, armature, variable pitch, space wound, lattice-wound universal and field coils can be wound by machines illustrated and described in 46-page catalog 54. A variety of accessories are also covered, and one page is devoted to winding formulas.

For more details circle NED-877 F4 on enclosed inquiry slip

Asymmetric Reflectors

Pittsburgh Reflector Co.—In 12 illustrated pages, bulletin B deals with asymmetrical reflectors for all types of lighting applications. Different types of reflectors are discussed in relation to effect desired. The various types of reflecting surfaces are also covered, with a view to selection of the proper surface for maximum foot-candle efficiency.

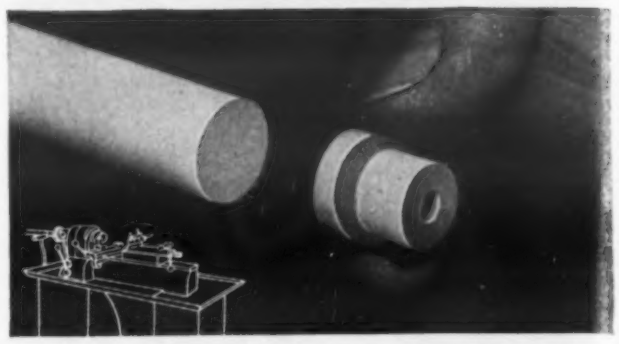
For more details circle NED-878 F4 on enclosed inquiry slip

Pressure Test Plugs

Mechanical Products Corp.—Three different types of test plugs and filling connectors for testing pressure vessels are covered in 8-page illustrated catalog 354. Principles used are pull-up seal, for pressures to 500 psi, and expanding and compression seals for pressures to 100 psi. Plugs can be used for both pneumatic and hydraulic systems. Operating principles, design data and application information are given.

For more details circle NED-879 F4 on enclosed inquiry slip

POLYPENCO® NYLON SHAPES



END MAINTENANCE PROBLEMS with nylon parts machined in your shop

- Get nylon's wear resistance in gears, bearings, bushings, cams, rollers, etc.
- End lubrication, scoring, backlash, noise, corrosion
- Make one part or hundreds with same economy on standard metalworking tools
- Immediate warehouse delivery of most sizes
- Uniform high quality . . . technical help

WRITE FOR INFORMATION

The POLYMER CORPORATION of Penna. • Reading, Penna.
In Canada: Polypenco, Inc., 2052 St. Catherine W., Montreal, P.Q.

POLYPENCO® NYLON ... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)

*trademark for DuPont tetrafluoroethylene resin

For more details circle NED-880 F4 on enclosed inquiry slip

Give your production a real hand...specify ARco RUBBER PARTS

● Dipped, form-dipped, molded, extruded rubber parts, fabricated sponge parts . . . vast, complete facilities . . . new, advanced production methods . . . these ARco services assure you rubber parts that will meet your "tightest" production schedules.

Give your product the advantages of sound abatement, electrical and thermal insulation, corrosion and abrasion resistance with rubber.

Consult ARco engineers on rubber component requirements. No obligation.

Valuable literature available—Write today!

AUTOMOTIVE RUBBER COMPANY • INC.
Manufacturers • Designers • Engineers
12586 BEECH RD. • DETROIT 28, MICH.

ARco RUBBER PROCESSORS
4033 Homestead Rd. • Houston, Texas

ANYTHING CAN BE COVERED WITH RUBBER BY . . . ARco

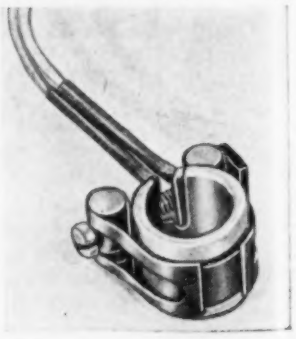
For more details circle NED-881 F4 on enclosed inquiry slip

The Case of the **"HOT DIMPLES"**

Solved by WATLOW ELECTRIC HEAT

The case involved the loss of costly production hours. The client: an Aircraft Equipment Mfg. The suspect: a "Dimpling Press", used in aluminum riveting operations. All the clues pointed to faulty heating by previous methods: frequent burnouts, costly temperature lags, lack of accurate heat control.

Watlow solved the case with the custom-designed electrically-heated band unit shown here. Made of coin silver, 1" wide, .718 I.D., with a special ½" clamping band and 24" leads, it operates at 650°F., 115v-175W, and offers long life . . . quick, steady heat. The Case of the Hot Dimples was solved.

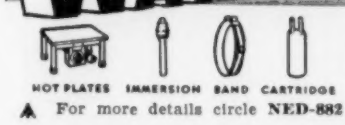


For fast, dependable heat— take your problems to Watlow

WATLOW ELECTRIC MFG. CO.

Since 1922—Designers and Manufacturers of Electric Heating Units

1374 FERGUSON AVE.
SAINT LOUIS 14, MO.



For more details circle NED-882 F4 on enclosed inquiry slip

New "EARN-ITS-OWN-WAY" LEASE PLAN* eliminates capital investment—puts an Automatic truck in your plant today!

Now you can *lease* an Automatic truck, complete with battery and charger, for as little as $1.53 a day ...which drops to an unbelievable *14¢ a day* after 5 year lease term expires.

"Earn-Its-Own-Way" Plan also includes a deferred-payment Purchase plan and a variety of flexible options.

Under "Earn-Its-Own-Way" Plan, Automatic trucks can *pay for themselves* —and give you a profit besides!

**Plan available in U.S.A. only*

Automatic
61 West 87th St., Dept. H-4
Chicago 20, Illinois

World's Largest Exclusive Builder Of Electric-Driven Industrial Trucks

▲ For more details circle **NED-883 F4** on enclosed inquiry slip ▲

protect your machinery with

maintenance free **LOVEJOY FLEXIBLE COUPLINGS**

When you install Lovejoy Flexible Couplings you get more than just long-lasting smooth power transmission. You get maximum protection against surge, backlash and starting torque. You get reduced down-time and less maintenance, since cushions can be changed without shutdown and **Lovejoy Flexible Couplings never require lubrication.**

Accurately machined bodies and jaws and cushioning materials engineered to the load conditions are combined in a compactly designed coupling to keep your machinery running better . . . longer.

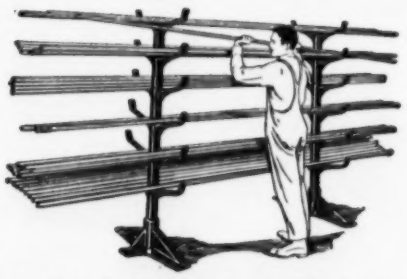
Types and sizes for all applications

Send for complete catalog . . . . Yours without obligation.

LOVEJOY FLEXIBLE COUPLING CO.
4803 W. Lake Street, Chicago 44, Illinois
Also Mfrs. of Universal Joints, Variable Speed Pulleys and Transmissions

▲ For more details circle **NED-884 F4** on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save waiting mechanics time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle **NED-885 F4** on enclosed inquiry slip ▲

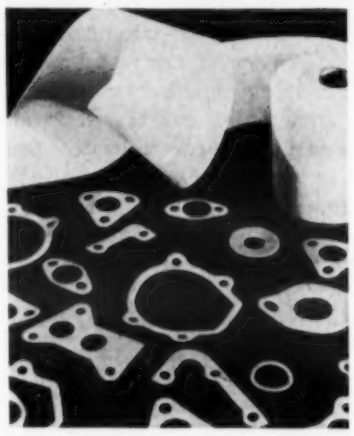
New Processes & Materials

SPONGE RUBBER MATTING reduces foot fatigue

Sponge rubber matting is designed to reduce foot fatigue of workers whose jobs keep them on their feet for long periods of time. Called Foot-Ease, it has two layer construction of sponge rubber protected by a tough rubber cover designed to cushion effects of concrete, tile or similar floors. It is available in either ribbed or pyramid surfaces in 25-ft long 36-in. wide lengths. Made by **United States Rubber Co.,** 1207 Rockefeller Center, New York 20, N. Y.

▲ For more details circle **NED-886 F4** on enclosed inquiry slip ▲

TEFLON TAPE nonadhesive and chemically inert



Strength, good electric properties and resistance to abrasion and corrosive chemicals at high and low temperatures are features of Kelon-T nonadhesive chemically inert tape. Made of Teflon tetrafluorethylene resin, it can be used where temperatures from −110 to 300° F exist. It is available in widths up to 12 in., with thicknesses varying from 0.002 to 0.125-in. Made by **W. S. Shamban & Co.,** Dept. O, 11617 W. Jefferson Blvd., Culver City, Calif.

▲ For more details circle **NED-887 F4** on enclosed inquiry slip ▲

SILICONE BOTTLE TREATMENT reduces breakage in filling process

Breakage of glass bottles during filling process or in shipment can be substantially reduced by treatment with SM-70 silicone emulsion. In tests, 7 per cent of silicone-treated bottles were broken by 11-in. drop as compared to 51 per cent of untreated bottles. Damage results on shipment of over 22,000 cases of treated bottles to all parts of country indicated loss rate of only 0.00017 per cent in contrast to normal rate of ½ to 1 per cent. Siliconized bottle interiors also allow easy drainage of fluids, foods and pharmaceuticals. Chemical can be cured on glass surfaces at low temperatures and can be applied by simple means in the annealing lehr. Only ½ gram is required to coat a gross of 5-oz bottles. Developed by **General Electric Co.,** Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle **NED-888 F4** on enclosed inquiry slip ▲

RUBBER-BONDED ABRASIVES compounded with silicon carbide

Series of rubber cushioned abrasives compounded with silicon carbide has been added to the Brightboy line. (*Note: In the description of these products, NED-1004 D4, Apr. '54, we failed to point out that the Brightboy line will continue to include rubber-bonded abrasives compounded with aluminum oxide.*) Resilience of the bond together with the evenly dispersed abrasive adapt wheels for a wide variety of operations on both hard and soft metals, ranging from burring to finishing and polishing. Grain sizes from extra fine to extra coarse are available in wheels, disks, sticks, rods, cylinders, tablets and blocks for machine and manual operations. Made by **Weldon Roberts Rubber Co.,** Brightboy Industrial Div., Sixth Ave. & N. Thirteenth St., Newark 7, N. J.

▲ For more details circle **NED-889 F4** on enclosed inquiry slip ▲

NOBODY but NOBODY...

CAN GIVE YOU FINER
PRECISION MADE Multiple Spindle DRILL HEADS

Root fixed center drill heads, for medium to heavy work, are custom engineered, and delivery prompt. Experience has proved their unsurpassed quality, so why buy less than the best when Root costs no more.

Get all the facts — write today, no obligation.

B. M. ROOT CO.
YORK — PENNA.

▲ For more details circle **NED-890 F4** on enclosed inquiry slip ▲

Attached by a simple draw-bar, the Trojan Tractor quickly converts existing, slow, hand-pushed hoists and light overhead cranes into fast, power-traveled units. Save time, effort; reduce material handling costs.

• *Ask for Trojan Tractor Bulletin 810 today.*

DETROIT HOIST & MACHINE CO.
8267 Morrow St., Detroit 11, Mich.
Designers and Manufacturers of Hoists and Cranes

Since 1905

▲ For more details circle **NED-891 F4** on enclosed inquiry slip ▲

CUT... OPERATING — MAINTENANCE — SPOILAGE COSTS!

ON YOUR TAPPING JOBS!

Procunier Tappers are the last word in economical, efficient, high speed tapping. Only Procunier has the unique construction features that permit inexperienced operators to tap like experts. Procunier Tappers provide many extra hours of continuous, accurate tapping without frequent "down-time" interruptions. Procunier Tappers are producing more—with fewer rejections, fewer spoiled pieces and a minimum of broken taps.

Only Procunier provides: new sensitive double cone friction clutch; soft cushioned action driving pressure; ball-bearing equipped; heat treated gears; special balanced gear reversing mechanism; smaller-lighter more accurate tru-grip tap holder; and many others.

Write for FREE Brochure

Giving full particulars on the complete line of Procunier Tapping Machines. Learn how you can adapt them to your specific needs.

PROCUNIER SAFETY CHUCK CO.
18-20 S. Clinton St., Chicago 6, Ill.
Dept. 6

Gentlemen: Please send your illustrated brochure giving complete details, specifications and prices on the improved line of Procunier High Speed Tapping Heads.

Name .....
Address .....
City ..... Zone.... State....

Procunier
Safety Chuck Company
18-20 Clinton St., Chicago 6, Ill.

▲ For more details circle **NED-892 F4** on enclosed inquiry slip ▲

Strand
FLEXIBLE SHAFTS

FLEXIBLE SHAFT MACHINES... versatile finishing facilities— no costly fixed equipment!

Grind, rotary file, brush, buff, polish — all with a single, portable Strand Flexible Shaft Machine . . . merely by changing the tool. New Quick Change Attachment makes changing tools easy. No wrenches required.

Operating speeds from 850 to 12000 RPM in famous *Strandflex* 4 & 5-speed Gear Drive Machines, up to 1 HP. Change speeds without using tools. Also, Strand High Speed Gear Attachment increases speeds up to 27000 RPM, suitable for high speed steel or carbide cutters.

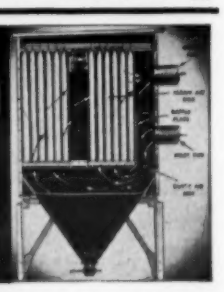
Best of all—the operator lifts the tool only, not the heavy bulky motor. This means less fatigue, higher production and fewer rejects.

FREE CATALOG describes full Strand line of Flexible Shaft Machines. See your Distributor or write today for Catalog 531-A

FRANKLIN BALMAR CORPORATION
N. A. STRAND DIVISION
Woodberry, Baltimore 11, Maryland
5001 N. Wolcott Avenue, Chicago 40, Ill.

▲ For more details circle **NED-893 F4** on enclosed inquiry slip ▲

10 ways to get more for your money *in Dust and Fume Control*



Dustube® cloth-tube type collectors provide higher efficiencies at lower cost in practically every dust and fume control application for these 10 money-saving reasons:

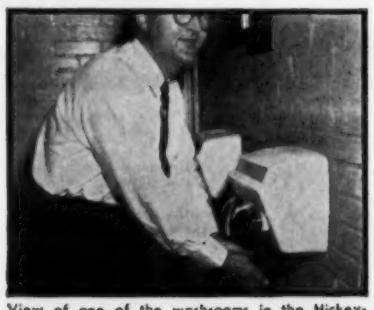
1. Cloth tube filtration is nearly 100% efficient.
2. Simplicity of design cuts initial cost.
3. Low power consumption cuts operating costs.
4. Simple installation and inspection cuts maintenance costs.
5. Cloth filter tubes are quickly replaced.
6. All filter tube tension is eliminated.
7. Complete range of fabrics for high temperatures and corrosive applications.
8. Bridging and clogging prevented.
9. Shaking is fast, thorough and automatic.
10. No coarse dusts reach the tube.

Catalog 372 explains these important advantages. Send for a free copy today.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle **NED-894 F4** on enclosed inquiry slip ▲

Why did Hickey-Freeman install 53 NATIONAL HAND DRYERS ?



View of one of the washrooms in the Hickey-Freeman plant showing an employee using one of the National Hand Dryers installed in all men and women's washrooms.

To reduce maintenance costs. National Hand Dryers eliminate cost of towels, storing of towels, filling cabinets, disposing of towels, cleaning washrooms, plumbing service.

To secure improved sanitation. Impartial tests conducted by the U. S. Health Service prove conclusively that National Hand Drying is far more sanitary than hand drying by any other method. Ask for complete Public Health Report.

Do you really know how much your washroom service is costing you? Save 85c out of every $1 you are now spending for washroom maintenance. Write today for cost comparison of towels vs. National Hand Dryers, Public Health Service Report and descriptive literature.

National Dryer Sales Corporation, 616 West Adams Street, Chicago 6, Ill.
Without obligation send cost comparison and Public Health report NE 4(6)
Name_____ Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-895 F4** on enclosed inquiry slip ▲

New Literature & Catalogs

Control Motors & Motorized Valves

Minneapolis-Honeywell Regulator Co., Industrial Div.—20-page illustrated catalog 8203 covers complete line of industrial control motors and motorized valves. Specifications, ordering information and a price supplement are included. Information regarding use of motors with globe, adjustable port, and butterfly valves and combinations is also given. Motors are available to provide two-position, floating or proportional control.

▲ For more details circle **NED-896 F4** on enclosed inquiry slip ▲

Synthetic Textile Finish Drying

Edwin L. Wiegand Co.—High speed drying and curing of synthetic textile finishes using Chromalox electric far-infrared radiant heaters is discussed in 22-page illustrated folder "The Textile Report." Installations can be made which will economically cure and dry fabrics at up to 60 yards per minute, producing uniform cure on materials ranging up to 1½ yards per pound, web widths to 216 in. and curing temperatures up to 300° F.

▲ For more details circle **NED-897 F4** on enclosed inquiry slip ▲

Lamp Sockets & Accessories

Daniel Woodhead Co.—8-page illustrated catalog folder covers various items in line of lamp sockets and accessories including inspection lamps of both open and vaporproof types, plug caps and cord connectors, automatic cord winder reel, and transformer for converting 110-v power to lower voltages for safe operation in damp or grounded locations. All equipment features use of a Neoprene base insulating compound.

▲ For more details circle **NED-898 F4** on enclosed inquiry slip ▲

Air Chucks

Whiton Machine Co.—Two types of air chucks and an improved air cylinder are covered in 8-page illustrated brochure AC 254. Chucks are of wedge and lever actuated types and are available in a complete size range. Cut-away drawings show design and construction details. Other accessories are also briefly described.

▲ For more details circle **NED-899 F4** on enclosed inquiry slip ▲

Water Softener

Cochrane Corp.—Designed for small to medium sized installations, Zeo-Flo sodium zeolite water softening apparatus is described in illustrated bulletin 4505-A. Units are available in a wide range of capacities, and are engineered to minimize piping requirements, facilitate installation and provide easy operation.

▲ For more details circle **NED-900 F4** on enclosed inquiry slip ▲

Recording Oscillograph

Consolidated Engineering Corp.—Type 5-114 recording oscillograph for taking records of static or dynamic data is covered in 16-page illustrated bulletin CEC-1500C. Design, components, method of operation, sensitivity and range are among aspects considered. Unit will record as many as 26 items of test data simultaneously.

▲ For more details circle **NED-901 F4** on enclosed inquiry slip ▲

Diaphragm Motor Valves

Minneapolis-Honeywell Regulator Co., Industrial Div.—40-page well-illustrated catalog No. 800 contains complete data on line of diaphragm motor valves. Types included are double seated, single seated, low flow, Venturi and three-way bodies. Complete specifications and features of each of these are given.

▲ For more details circle **NED-902 F4** on enclosed inquiry slip ▲

Vibration & Noise Deadener

Philip Carey Mfg. Co. — Hushmush is a sound deadening and vibration damping material. Illustrated 4-page bulletin tells how it can be spray or wipe-on applied to sheet metal surfaces. Nonflammable product is odorless, dries rapidly without cracking and has good temperature stability. Features, properties and applications are given.

▲ For more details circle **NED-903 F4** on enclosed inquiry slip ▲

Visual Plant Layouts

"Visual" Plant Layouts, Inc.—Recently released 1954 catalog not only completely details "Visual" equipment supplied, with prices, but explains new system under which layouts can be purchased.

▲ For more details circle **NED-904 F4** on enclosed inquiry slip ▲

COMPLETE FACE PROTECTION against sparks and flying particles

This Sellstrom No. 325 Dependon Face Shield has gained great popularity since its recent introduction as an addition to the Sellstrom line of Dependon Shields. It has a use in practically every industrial plant where there is an eye or face hazard. Here are a few of the outstanding features: 1. Completely covers and gives full protection to the face, eyes, ears, chin and forehead. 2. Genuine leather sweat band for utmost wearing comfort. 3. Patented Vulcoid adjustable head band to fit every head. 4. Large fibre top and formed bottom act as a single unit, being connected by sturdy fibre side pieces surrounding the cellulose acetate window. 5. Window is 6⅝" x 11¾". Your choice of .020, .040, or .060 clear or .020 green acetate. Most dealers carry this No. 325 Sellstrom Dependon Shield in stock for immediate delivery. We urge that you give this shield an opportunity to render service to your workers. If you desire, write us for additional information or for a sample Face Shield on memo for examination purposes. **Sellstrom Manufacturing Company, 654 North Aberdeen Street, Chicago 22, Illinois.** —*Advt.*

▲ For more details circle **NED-905 F4** on enclosed inquiry slip ▲

Brady Pumps

Designed and Built

We welcome your pump problems and inquiries. Brady specializes in the design and manufacture of small Centrifugal Pumps . . . used as original equipment by leading manufacturers in Air Conditioning, Refrigeration, Dairy, Machine Tool and many other Industries.

for your Specific job

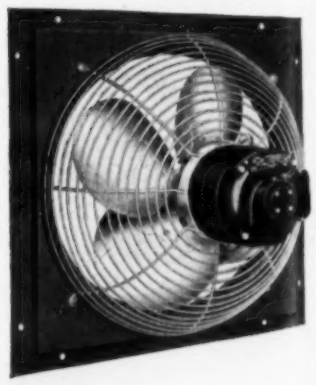
Write, phone or wire

Brady CORPORATION
1005 East 18th Street Muncie, Indiana

▲ For more details circle **NED-906 F4** on enclosed inquiry slip ▲

Two types, 10 basic sizes. Capacities from 610 CFM to 24,200 CFM.

nyb



PROPELLER FANS

Propeller type ventilating fans deliver large volumes of air at low resistance and low current consumption. All wheels are machine balanced for smooth, vibrationless operation. They are laboratory tested, accurately rated and fully guaranteed in strict accordance with Standard Codes.

CERTIFIED RATINGS

Write for Bulletin 541

THE NEW YORK BLOWER COMPANY
SALES OFFICES • 3171 SOUTH SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

▲ For more details circle **NED-907 F4** on enclosed inquiry slip ▲

New! Low-Cost! Wide-Range!

VARIABLE Speed Sheaves

Easily Attached to Any Machine

1/15 TO 15 HP.
RATIOS UP TO 8:1

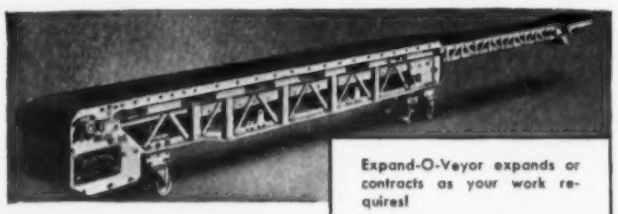
● Simple, sturdy Speed Selector Sheaves are applied to any machine in only a few minutes . . . giving you wide-range speed control at extremely low cost. You get wide speed variations with standard V-belts, since two variable pitch sheaves are used. Eliminates bulky sliding motor bases, movable jackshafts and wide, high-cost special V-belts.

• Standard V-belts • Automatic belt alignment
• Fixed shaft centers • LOW COST

Write FOR FREE BULLETIN

SPEED SELECTOR INC
118-N NOBLE COURT • CLEVELAND 13, OHIO

▲ For more details circle NED-908 F4 on enclosed inquiry slip ▲



Where can you use this new FARQUHAR Package-Handling EXPAND-O-VEYOR?

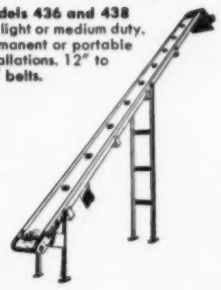
Expand-O-Veyor expands or contracts as your work requires!

Eliminates lost time caused by shifting equipment!

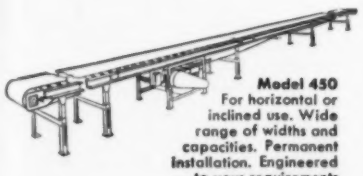
Use this new Farquhar Expand-O-Veyor at maximum length settings one day . . . at minimum the next day. Ideal for use on the end of a fixed conveyor system, permitting the discharge point to be varied without moving your entire line. Perfect for loading and unloading trucks—can be shortened or expanded as the truck becomes loaded or emptied. Get more information about this new Expand-O-Veyor's versatility today. Write to the address shown below, telling us what you move. There's no obligation, of course.

FARQUHAR HAS CONVEYORS FOR EVERY PURPOSE

Model 431
Rugged, medium duty package-handling conveyor. Portable or fixed units. Horizontal or inclined. Various mountings.

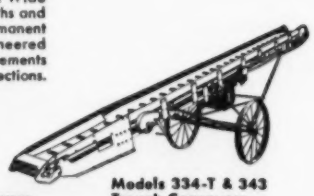


Models 436 and 438
For light or medium duty. Permanent or portable installations. 12" to 18" belts.



Model 450
For horizontal or inclined use. Wide range of widths and capacities. Permanent installation. Engineered to your requirements from standard sections.

Gravity Conveyors
Roller or Wheel type. Black velvet or Standard finish.



Models 334-T & 343 Trough Conveyors
For handling bulk, abrasives, powders, aggregates, etc., as well as small bags and bundles.

OLIVER Farquhar CONVEYORS

FREE! "Owners Report"—a booklet of case histories describing money-saving Farquhar conveyor installations. Write: THE OLIVER CORPORATION, A. B. Farquhar Div., Dept. E-04, York, Pa.

POWER-BELT & GRAVITY CONVEYORS

▲ For more details circle NED-909 F4 on enclosed inquiry slip ▲

New Processes & Materials

THREAD & GASKET SEALER
packaged in brush top cans

Plastic Lead Seal pipe thread and gasket sealing compound, offered in 1-lb brush-top cans, withstands pressures up to 6000 psi and temperatures to 500° F. It is insoluble in water, steam, gas, refrigerants and all petroleum products. Permanent type applicator need not be cleaned after use. Compound is UL-approved and is permanent and nonhardening, allowing easy disassembly of connections after considerable periods of time. Made by **Crane Packing Co.**, Dept. NDC, 1800 Cuyler Ave., Chicago 13, Ill.

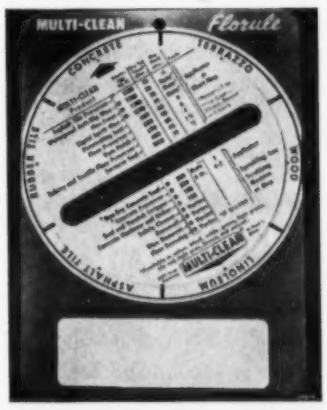
▲ For more details circle NED-910 F4 on enclosed inquiry slip ▲

RUST PREVENTIVE
protects stored or shipped machinery

Protection of machinery during shipment, storage or seasonal shut-downs is function of Gulf Oilcoat T, a compounded oil with nonmetallic high potency additive to prevent corrosion and rust of metal surfaces. Product is compatible with machine lubricating oils and does not develop harmful precipitates. It displaces any water film in event metal surfaces are already wet. Application can be by spraying, dipping, brushing or circulating through lubricating system, then draining. Developed by **Gulf Oil Corp.**, 1822 Gulf Bldg., Pittsburgh 30, Pa.

▲ For more details circle NED-911 F4 on enclosed inquiry slip ▲

FLOOR FINISHING GUIDE
also lists floor treating chemicals

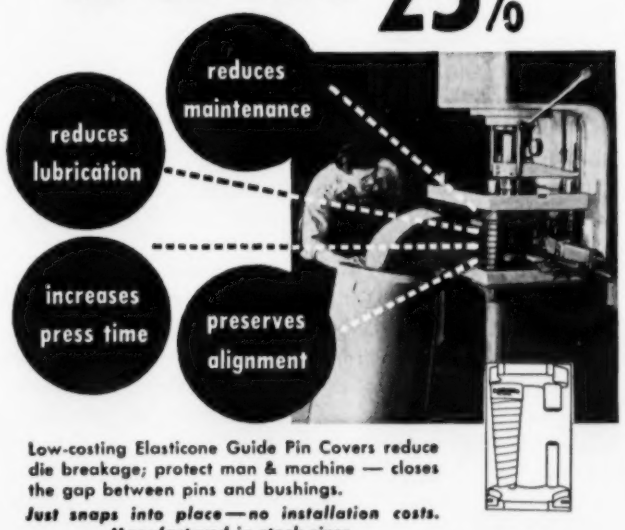


Ready reference to information on how to treat various types of floors is provided by this 4 x 6-in. cardboard Florule. When dial is rotated to certain type of floor, such information as proper floor materials to use, coverage in square feet per gallon for each, drying times and method of application is disclosed in dial slot. Reverse side catalogs floor treating chemicals and gives packaging information. Florule is available free from **Multi-Clean Products, Inc.**, 2275-79 Ford Pkwy., St. Paul 1, Minn.

▲ For more details circle NED-912 F4 on enclosed inquiry slip ▲

ELASTICONE® GUIDE PIN COVERS

CUT DIE COSTS 25%



Low-costing Elasticone Guide Pin Covers reduce die breakage; protect man & machine — closes the gap between pins and bushings.
Just snaps into place—no installation costs. Manufactured in stock sizes.

Write for full information and literature.

CENTRAL

2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

▲ For more details circle NED-913 F4 on enclosed inquiry slip ▲

TRAC-LIFT

ALL-PURPOSE FORK LIFT TRUCK FOR LIFTING, CARRYING & TOWING

Service and parts for engines and chassis are available at International Harvester dealers throughout the United States

Model 40 handles up to 4000-lb loads and model 20 will lift and transport up to 2000-lb loads.

Machines feature high underclearance and good traction for use on rough terrain as well as on paved areas both indoors and out. Powered by International Harvester gasoline Tractor engines and Chassis of proven ability and long service, units have standard 96-in. lifting heights, with 72, 108 and 120 in. lifts optional. Both have power forward tilt of 4 degrees and backward tilt of 10 degrees. Power hydraulic lift and tilt system are engineered for easy maintenance and safety.
Optional equipment includes head and rear lights, 1/3-cu yd loading bucket, 6-ft snow and dozer blade, and 8-ft loading boom. *For complete information, write to:*

★ ★ ★ ★ ★ PIPER & PAINE
NUNDA, NEW YORK

▲ For more details circle NED-914 F4 on enclosed inquiry slip ▲

Check CONNEAUT FOR PLASTIC EXTRUSIONS

Whatever your problem regarding the application of extruded plastics, we can give you practical, resultful help at Conneaut. We can handle your production requirements for almost any extruded shape in polyethylenes or Vinyls, or develop *special* compounds to meet unusual applications. Don't overlook the profit possibilities in fabricating with plastic extrusions . . . check Conneaut! At no obligation, we'll quote promptly from your blue prints and specifications, or analyze your problem and make recommendations.

SEND FOR FREE, ILLUSTRATED FOLDER
Contains complete details on Conneaut's custom service on plastics compounding and extruding. 1150

THE CONNEAUT RUBBER AND PLASTICS COMPANY
CONNEAUT, OHIO

▲ For more details circle NED-915 F4 on enclosed inquiry slip ▲

GOOD NEWS ABOUT WHEELS

NEWS! About how 44 centers and only 22 bearings give a choice of 144 sizes to 12" x 4".

NEWS! About American Steelite® light-weight champs—weighing up to 9 pounds less than ordinary wheels.

NEWS! About American Tread-Lock method—the tread is *Rolled On So It Won't Roll Off!*

NOW! Get all this NEWS in the NEW bulletin on American Industrial Wheels, from:

THE AMERICAN PULLEY COMPANY, Phila., Pa.

The American Pulley Company 4294 WISSAHICKON AVE., PHILA. 29, PA.
Gentlemen:
I want the NEWS about Wheels—rush me your new American Steelite® Wheel Bulletin.
Name_____
Firm Name_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-916 F4 on enclosed inquiry slip ▲

Stonewall used on laboratory walls

Stonewall BOARD

- FIREPROOF
- WEATHERPROOF
- NEVER NEEDS PAINTING

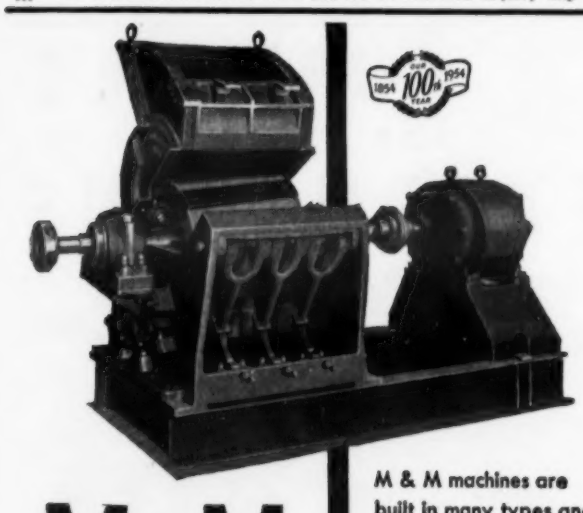
Ruberoid Stonewall *asbestos-cement* Board is ideal for interior or exterior construction . . . cuts building costs . . . saves maintenance expense. It is fireproof, water-resistant, rot-proof, rat-proof, rust-proof . . . never needs paint. It is strong and rigid, yet bendable and easy-to-work. Can be sawed or scored and broken to size. Takes nails readily.

Write today for literature, cost and where to buy it. The Ruberoid Co., 500 Fifth Ave., N. Y. 36, N. Y.

The RUBEROID Co.

Asphalt and Asbestos Building Materials

For more details circle NED-917 F4 on enclosed inquiry slip



M&M HOGGING MACHINES

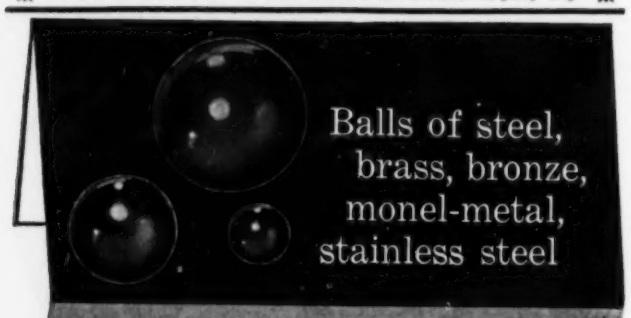
M & M machines are built in many types and sizes for hogging wood, paper, plastics, rubber, meat, bones into uniform size for easy disposal or further processing into valuable by-products. Write for illustrated specification catalog.

78

MITTS & MERRILL

1000 SOUTH WATER • SAGINAW, MICHIGAN

For more details circle NED-918 F4 on enclosed inquiry slip



Balls of steel, brass, bronze, monel-metal, stainless steel

BALLS HOOVER BALL BEARINGS

America's only ball bearings with Honed Raceways

The Aristocrat of Bearings

HOOVER BALL and BEARING COMPANY
Ann Arbor, Michigan

For more details circle NED-919 F4 on enclosed inquiry slip

New Literature & Catalogs

Production & Service Facilities

Cloth-bound and well-illustrated, 48-page book "Service & Products" thoroughly portrays the various divisions of this company. Leasing services include tank cars, Airslide and Trans-Flo railroad cars, and specialized cars. Manufacturing facilities are comprised of car building, plate and welding, gas holder, vapor seal, process equipment, chemical nickel plating equipment, plastics molding and fastenings divisions. Typical products and plant facilities are outlined. Available only by writing on company letterhead to: Robin Douglas, Adv. Mgr., General American Transportation Corp., Dept. N-19, 135 S. LaSalle St., Chicago 90, Ill.

For more details circle NED-920 F4 on enclosed inquiry slip

Measuring, Indicating, Controlling Units

Schaevitz Engineering—Designed for use in wide range of industries, line of measuring, indicating, controlling and recording devices is subject of 8-page illustrated bulletin. Details are given on linear and angular accelerometers, linear and angular variable differential transformers, pressure transducers and rotary accelerometers. Typical applications of various instruments are shown.

For more details circle NED-921 F4 on enclosed inquiry slip

Rebuilding Worn Out Presses

Verson Allsteel Press Co.—Reissue of 12-page bulletin R-49 entitled, "New Life for Worn-Out or Damaged Presses" outlines company's rebuilding facilities and shows examples of typical rebuilding jobs. Machines from small press brakes to huge presses weighing up to 600,000 lb have been rebuilt.

For more details circle NED-922 F4 on enclosed inquiry slip

Flexible Bellows Design

Flexonics Corp.—16-page "Flexon Bellows Design Guide" covers the manufacture, design, applications and specifications for Flexon bellows. These units, used as valve stem seals and in steam traps are available in stainless steel, monel, brass and other metals, in sizes from 5/16-in. ID to 12⅞ in. OD.

For more details circle NED-923 F4 on enclosed inquiry slip

In-Between Materials Handling

Big Joe Mfg. Co.—20-page pocket guide book offers an analysis of "In-Between Handling," the system involving short distance hydraulic manipulation of materials too heavy for manual handling, yet not requiring high priced motor-driven equipment. Functions that unit performs and how it might be integrated with present handling systems are considered.

For more details circle NED-924 F4 on enclosed inquiry slip

Magnetic Servo Amplifiers

Magnetic Amplifiers, Inc.—Standard line of 60 and 400 cps magnetic servo amplifiers are discussed in illustrated bulletin S235-1-54. Servo systems using these components are also covered. Standard and specially designed magnetic voltage regulators for motor generator and alternator sets are also included in product line.

For more details circle NED-925 F4 on enclosed inquiry slip

Heat Exchanger

Niagara Blower Co.—Used for cooling or controlling the temperatures of industrial liquids, Aero heat exchangers are covered in 4-page illustrated bulletin 120. Typical applications of apparatus are shown and operation is explained with the aid of drawings and cut-away photographs.

For more details circle NED-926 F4 on enclosed inquiry slip

Drill Jig Bushings

Ex-Cell-O Corp.—Drill jig bushing catalog illustrates and describes expanded line. Bushings previously listed as specials are now shown as standard and stocked. Approximately 1000 added lengths and sizes have been added to drill ranges and renewable bushings and liners. New conversion chart is included.

For more details circle NED-927 F4 on enclosed inquiry slip

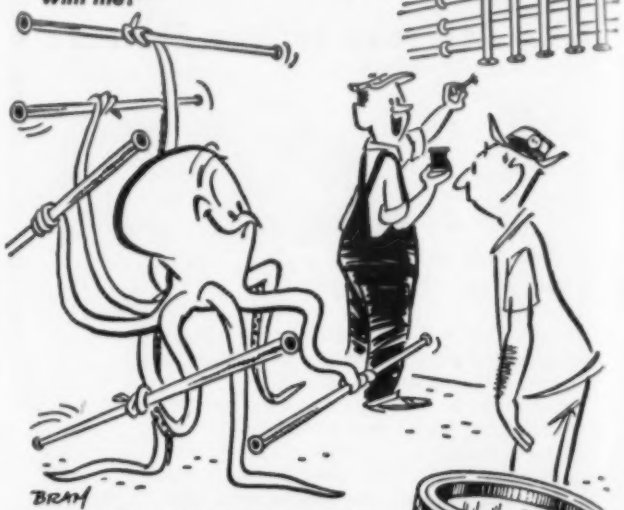
Power Transmission Equipment

Lovejoy Flexible Coupling Co.—24-page illustrated catalog No. 118 covers variable speed pulleys, wide V-belts, sheaves, motor bases, countershafts and a variable speed device. Complete specifications are given on all items. Also briefly described are couplings and universal joints.

For more details circle NED-928 F4 on enclosed inquiry slip

KEYNOTES

"Assembly's so fast with Key-Tite, I need Oscar here to keep up with me!"



The perfect sealer for pipes carrying water, gas, low-pressure steam.

Write for FREE sample.

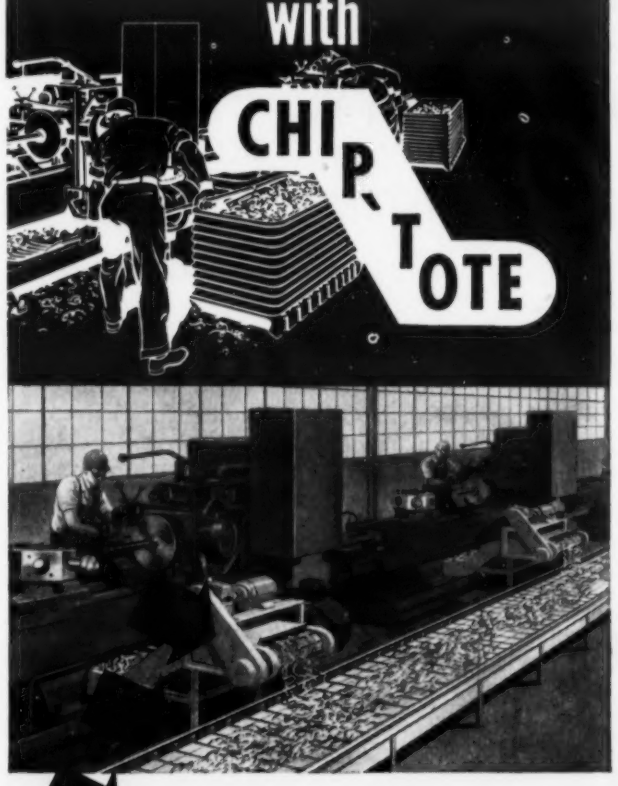
SEALS TIGHT.... BREAKS RIGHT!

A Product of KEY COMPANY
2601 McCausland • East St. Louis, Illinois

KEY-TITE WATER PROOF PIPE JOINT COMPOUND

For more details circle NED-929 F4 on enclosed inquiry slip

Automatic Scrap Removal on Any Machine Tool with



ELIMINATE SHUT-DOWN SPEED PRODUCTION

Get 60 minutes production every hour from your machine tools! CHIP-TOTES remove chips, turnings and borings continuously and automatically from machine tools while they are in operation . . . there's no need to shut down valuable machinery for manual scrap removal.

CHIP-TOTES can be furnished to serve practically any automatic or multiple-spindle machine. Speed of operation is synchronized with the machine's metal-removing capacity and rate of coolant flow.

For utmost efficiency, a battery of CHIP-TOTES can be set up for discharge onto MAY-FRAN hinged-steel belt conveyors which transmit scrap to disposal point.

For information on how CHIP-TOTES and MAY-FRAN engineered handling systems can increase your production, write today for catalog.

1737-MF

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.

1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

For more details circle NED-930 F4 on enclosed inquiry slip

IS THIS YOUR CONTROL PROBLEM?

1. How to indicate a change in resistance through a filter due to a clogging of the filter?
2. How to indicate a change in differential across an orifice due to a change in air flow conditions?
3. How to indicate an unbalanced condition of two air ducts?

MERCOID HAS THE SOLUTION

A Diaphragm Differential Pressure Control which operates from minute changes (03 of water) in the difference between two pressures.
Ranges to cover most applications—(inches of water) 6" vac. to 6" press., and 30" vac. to 30" pressure.
MERCURY SWITCH EQUIPPED

DIFFERENTIAL PRESSURE CONTROL — EXPLOSION-PROOF HOUSING — AVAILABLE IN WEATHERPROOF HOUSING

WRITE FOR BULLETIN
THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILL.
NEW YORK 17, N. Y. 205 E. 42nd Street
PHILADELPHIA 32, PA. 3137 N. Broad Street

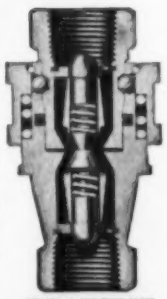
For more details circle NED-931 F4 on enclosed inquiry slip

HANSEN

Quick-Connective TWO-WAY SHUT-OFF COUPLINGS

Female pipe thread connections from ⅛" to 1"

Both ends of line are positively sealed when you disconnect a Hansen Series HK Two-Way Shut-Off Coupling. To connect, just pull back sleeve and push Plug into Socket. To disconnect, merely pull back sleeve. No tools required. Identical valves in Socket and Plug permit free flow of gas or liquid when Coupling is connected—practically eliminate spilling of liquid or escape of gas when disconnected. Available in brass or steel.



SERIES 4-HK TWO-WAY SHUT-OFF COUPLING

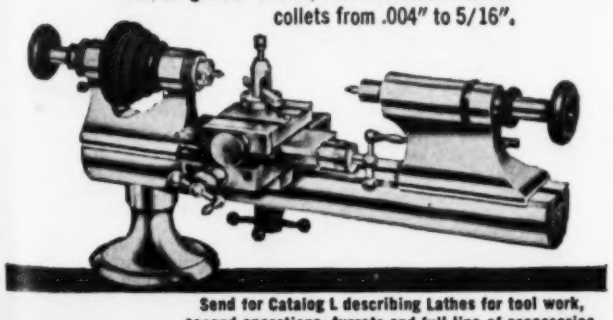
Also Straight-Through and One-Way Shut-Off Couplings. Write for catalog.

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-932 F4 on enclosed inquiry slip

SMALL INSTRUMENT PARTS ARE MADE BEST ON LEVIN® LATHES

Twenty-three models for all types of work. 4" swing, Bed Length 12" or 18"; over 100 stock sizes of collets from .004" to 5/16".



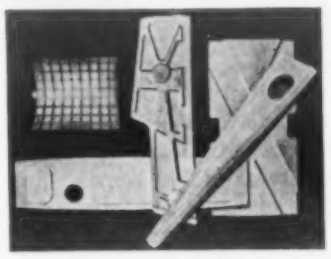
Send for Catalog L describing Lathes for tool work, second operations; turrets and full line of accessories.

LOUIS LEVIN & SON, INC., 3610 S. BROADWAY, LOS ANGELES 7, CALIF.

For more details circle NED-933 F4 on enclosed inquiry slip

New Processes & Materials

FORMING PROCESS
metal parts chemically formed



Precision forming of metal parts from aluminum sheets and forging stock is possible with the Chem - Mill process which calls for immersion of parts in chemical solutions. Developed by North American Aviation, process offers contouring without application of physical force. Process can be used for redimensioning of parts to closer tolerances. It permits holding of close tolerances on almost any desired complexity of design, which may be tapered, curved or otherwise intricate. Process available for licensing from **Turco Products, Inc.**, Dept. E-7, 6135 S. Central Ave., Los Angeles 1, Calif.

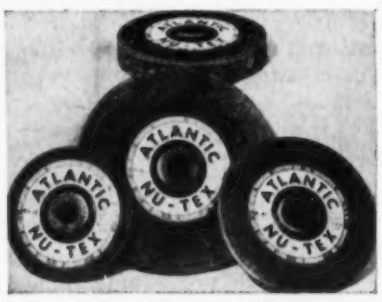
For more details circle NED-934 F4 on enclosed inquiry slip

INSTRUMENT MIRROR COATING
reflectivity equals pure aluminum

Aluminized reflective coating for instrument mirrors gives reflectivity equal to that of pure aluminum in all ranges of the spectrum. It is applied under evacuation and is comparable in hardness to the harder precious metals. It can be applied to all types of industrial mirrors and can be cleaned repeatedly without damage. As one measure of the coating's durability, it is reported that exposure to an open flame produces no adverse effect. Made by **Houston Technical Laboratories**, Dept. A, 2424 Branard, Houston 6, Tex.

For more details circle NED-935 F4 on enclosed inquiry slip

GRINDING WHEELS
are textile-reinforced



Designed for cutting, slotting, weld removal and rough grinding, textile-reinforced Nu-Tex disk grinding wheels are available in depressed center and straight disk types. Resinoid bond and textile reinforcement provide cushioned cutting action for long wheel life. Depressed center wheels are available in 7 and 9-in. diameters in thicknesses from ⅛ to ⅜-in. Straight wheels are offered in sizes ranging from less than ½ to 10-in diameters and thicknesses from 1/16 to ½-in. Grit sizes range from 0 (hard) to 6 (soft). Made by **Atlantic Abrasive Corp.**, Dept. 504, South Braintree 85, Mass.

For more details circle NED-936 F4 on enclosed inquiry slip

It's practically WATER-WHITE a NEW chemically resistant baking finish— DURACHEM

For all types of metal products from heavy hardware to fine jewelry

A new baking type synthetic finish—DURACHEM—combines unusual clarity with a high degree of chemical resistance. Almost water-white—remains clear after exposure to heat and sunlight—resists salt spray and perspiration. Available in colors too.

Samples and technical literature on request

OUR 78th YEAR — PIONEERS M&W Co 1876 IN PROTECTION
MAAS & WALDSTEIN CO. 2116 McCARTER HIGHWAY NEWARK 4, NEW JERSEY
Midwest Div. 1658 Carroll Ave., Chicago 12, Ill.
Pacific Coast Div. Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.
MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-937 F4 on enclosed inquiry slip

Announcing BOKUM BORING TOOLS IN Short-Neck LENGTHS

25 NEW STYLE A and 25 NEW STYLE B TOOLS

in each of high speed steel and carbide-tipped for screw machines and high production boring machines.

Write to Dept. T for new catalog.

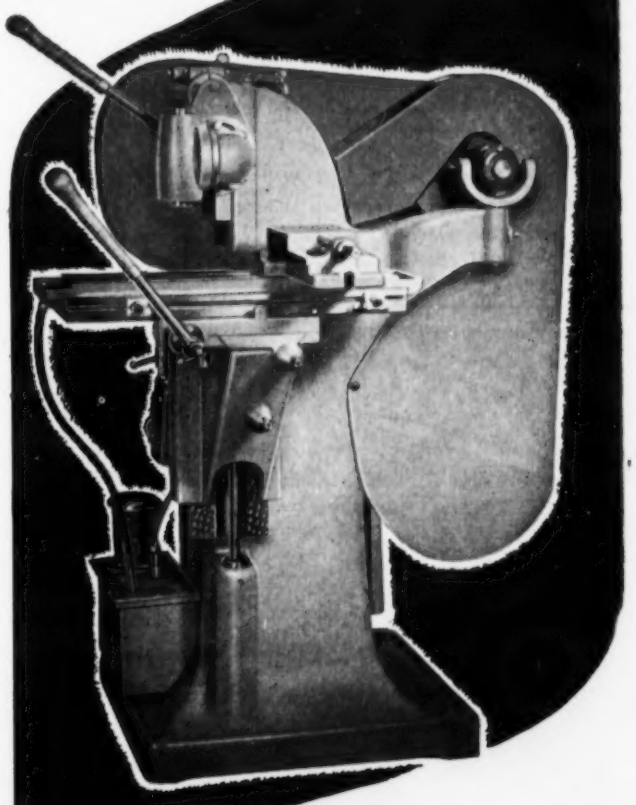
TRADE MARK REG. U. S. PAT. OFF.
BOKUM TOOL CO. 14775 Wildemere Ave., Detroit 38, Mich.

For more details circle NED-938 F4 on enclosed inquiry slip

Cut Costs on Tool Room, Development and Mass Production Milling with

U. S. No. 1 HORIZONTAL MILLING MACHINES

Time-proved, shop-proved, profit-proved "U. S. No. 1" heavy duty, hand-feed milling machines are outstandingly America's No. 1 Machine Tool value. Easily adapted to production with automatic devices.



SEND FOR DATA AND SUGGESTIONS

Suggestions as to how a U. S. No. 1 Milling Machine can cut costs on your particular production needs, as well as complete data on the basic machine and attachments, gladly furnished on request.

THE U. S.-BURKE MACHINE TOOL DIV.
Brotherton Road 2, Cincinnati 27, Ohio

For more details circle NED-939 F4 on enclosed inquiry slip

FACE-MOUNT, CLOSE-COUPLED & FLEXIBLE-COUPLED WATER TRANSFER PUMPS

PEERLESS PUMPS

America's MOST COMPLETE LINE AVAILABLE IN TYPES, MODELS AND SIZES from ¼ to 150 hp—for capacities from 10 to 5500 gpm—for heads up to 260 ft.

For all water transfer services. Sizes up to 5 hp equipped with mechanical shaft seals. All sizes are bronze fitted. Economical to maintain and operate. Highly efficient in performance.

DESCRIPTIVE 24 PAGE BULLETIN No. B-2300 is complete with illustrations and pump selection charts.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
301 West Avenue 26, Los Angeles 31, Calif. • New York; Indianapolis; Chicago; St. Louis; Atlanta; Dallas; Phoenix; Los Angeles, Fresno, Calif.

▲ For more details circle NED-943 F4 on enclosed inquiry slip ▲

IN ONE MINUTE'S TIME

AWS Class E-6012 electrode produced this fillet.

THIS MUCH MORE WELD

was made in the same time in the same steel plate

with the new AIRCO EASYARC 12 electrode

New AWS Class E-6024

Actual length of welds: E-6012—5 1/16", Easyarc 12—12". Current settings: 230 amps AC for E-6012, 275 amps AC for Easyarc 12. Both welds made in 1/4" mild steel plate with 3/16" diameter electrodes.

Write for "Pocket Guide to Airco Electrodes."

AIR REDUCTION
60 E. 42nd Street
New York 17, N. Y.

Divisions of Air Reduction Co., Inc.
Air Reduction Sales Co.
Air Reduction Magnolia Co.
Air Reduction Pacific Co.
Represented internationally by Airco Company International

▲ For more details circle NED-944 F4 on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

KELLER TOOLS

Keller Tool Company
1331 Fulton St., Grand Haven, Mich.

▲ For more details circle NED-945 F4 on enclosed inquiry slip ▲

New Literature & Catalogs

Theory of Gas Regulation

One of the most complete textbooks on the theory of gas regulation and on the installation and maintenance of gas regulators, 154-page, ring-bound handbook contains more than 120 drawings and photos. Although only Rockwell regulators are specifically described, book is devoted to problems common to the entire field. It is available at cost from Rockwell Mfg. Co., Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-946 F4 on enclosed inquiry slip ▲

Profilometer Demonstration Service

Micrometrical Mfg. Co. — Company's in-plant demonstration service on the Profilometer for measuring surface roughness is reviewed in 8-page illustrated bulletin LT90. It discusses field representatives who make the demonstrations, shows the equipment they carry and tells what a demonstration can disclose about production operations.

▲ For more details circle NED-947 F4 on enclosed inquiry slip ▲

Pressure Regulating & Relief Valves

Schade Valve Mfg. Co.—24-page catalog 207 is descriptive of pressure regulating and relief valves and provides the necessary data for proper selection. Regulating valves covered are tight-closing, single-seated types for steam or air; for steam, air, gas, oil and water; for steam and hot fluids; and for water. Relief valves are for water; for air, gas and water; and for steam, air, gas and water. Thermodynamic properties of saturated steam are tabulated.

▲ For more details circle NED-948 F4 on enclosed inquiry slip ▲

Heavy Duty Limit Switch

R. B. Denison Mfg. Co.—Mechanical, electrical and maintenance characteristics of the Loxswitch heavy duty limit switch are covered in 4-page brochure LS54A. Designed for machine tools, switch has long life, possesses trigger type mechanism and has bounce features of a light duty switch combined with vibration resistance of heavy duty unit.

▲ For more details circle NED-949 F4 on enclosed inquiry slip ▲

Grommet Belts

B. F. Goodrich Co., Industrial Products Div.—Belts of standard and high capacity construction are featured in 8-page V-belt catalog 2170. Endless grommets are surrounded by tough, resilient rubber and bend easily for uniform grip. Procedure on how to figure a V-belt drive is highlighted.

▲ For more details circle NED-950 F4 on enclosed inquiry slip ▲

Better Plant Lubrication

Stewart-Warner Corp., Alemite Div.—"Five Plans for Better Plant Lubrication" is title of 12-page booklet which graphically emphasizes the five plans for lubricant handling demonstrated in companion 35-mm sound-slide film "No Margin for Error." Booklet also points out seven ways good plant lubrication can minimize machine down time, waste of lubricant and product spoilage and also eliminate safety hazards.

▲ For more details circle NED-951 F4 on enclosed inquiry slip ▲

Precision Drilling Machine

Electro-Mechano Co.—Drilling, reaming, spot facing, tapping and counterboring are jobs which can be performed on 16-in. precision drilling machines. Units feature instant speed selection of 150 to 4000 rpm. Bench and floor models are described and specified in 4-page folder.

▲ For more details circle NED-952 F4 on enclosed inquiry slip ▲

Eccentric-Action Vibrating Screens

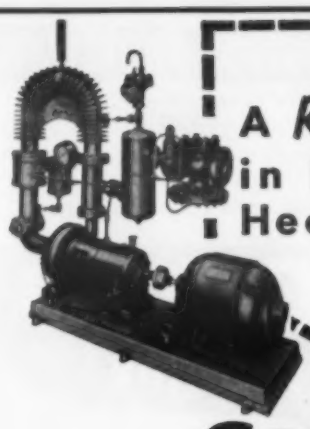
Protective Equipment Corp.—Gyroset positive eccentric action vibrating screens for sizing and grading wet or dry materials are subject of 8-page bulletin 852. Units are built in six widths from 18 to 72 in. with lengths running from 4 to 16 ft. Circle throw action is adjustable.

▲ For more details circle NED-953 F4 on enclosed inquiry slip ▲

Protective Device Tester

Multi-Amp Corp. — 12-page brochure "Do Your Protective Devices Really Protect?" describes two models of Multi-Amp portable high current test units. These units allow safe testing and calibrating of such protective devices as overload relays, air circuit breakers, magnetic and thermal oil circuit breakers, current transformers, fuse links and meters.

▲ For more details circle NED-954 F4 on enclosed inquiry slip ▲



A REVOLUTION in Increased Heat Transfer

Cochrane

C-B System removes condensate, air and non-condensible gases from processing equipment (any condensing medium) with

JET SPEED!

Assures optimum efficiency of process equipment by providing:

- FASTER HEAT
- HIGHER TEMPERATURES
- MORE UNIFORM HEAT
- LOWER MAINTENANCE

Faster, more uniform heat transfer from equipment results in:

HIGHER PRODUCTION—speeds start up time; shortens cooking, heating, drying cycles.

IMPROVED QUALITY—uniform heating—levels out fluctuations; eliminate cold spots.

FUEL SAVINGS—condensate returned to boilers without appreciable pressure or temperature drop. Fuel savings range as high as 20%. Make up water sharply reduced.

C 100.19

Cochrane CORPORATION
3143 N. 17th St. Philadelphia 32, Pa.

▲ For more details circle NED-955 F4 on enclosed inquiry slip ▲

NOLAN ONE-MAN CAR DOOR OPENER

Opens Doors in 20 seconds or less!

The Nolan Car Door Opener gives one man a tremendous amount of pulling energy, to get the most stubborn, hard-rolling door wide open in a hurry!

No gangs needed. No mangled limbs or loss of life. A few quick pulls on anchor chain gets any door open in a jiffy. The NOLAN saves its low initial cost in first hour of operation.

New safety and efficiency features now make the Nolan 1-Man Car Door Opener a more necessary labor-saving money-saving help than ever before.

Free Literature. Order one or more NOLAN Model-H Car Door Openers now. Catalog on request.

MANY THOUSANDS IN CONSTANT DAILY USE

$37.50 F.O.B. Bowerston

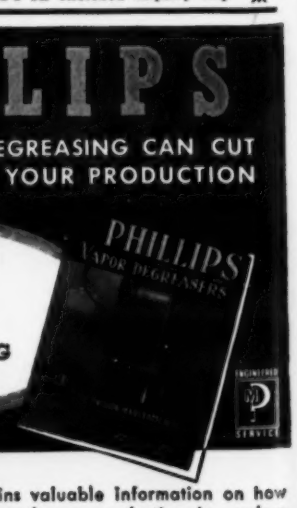
THE NOLAN COMPANY, 128 Pennsylvania Street, Bowerston, Ohio

▲ For more details circle NED-956 F4 on enclosed inquiry slip ▲

PHILLIPS

LEARN HOW VAPOR DEGREASING CAN CUT COSTS AND INCREASE YOUR PRODUCTION

SEND FOR YOUR FREE COPY OF PHILLIPS' NEW DEGREASING BULLETIN



HERE's a new bulletin that contains valuable information on how modern vapor degreasing speeds up production in modern factories by making metal cleaning operations faster and more economical. Listed below are some of the features of this new book:

WHAT DEGREASING IS — A full description of what vapor degreasing is and what it will accomplish for you.

HOW DEGREASERS WORK — A series of photographs and written description shows what happens in the degreasing process.

DEGREASER APPLICATIONS — Illustrates number of different applications of degreasers to solve metal cleaning problems in various industries.

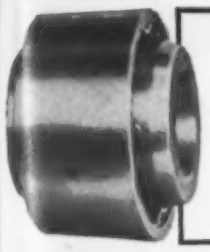
COMPLETE LINE OF STANDARD DEGREASERS — Describes Phillips' full line of standard equipment, including batch type, combination, rotomatic, and conveyorized models.

SPECIALLY ENGINEERED UNITS — Tells about Phillips' service in designing special degreasing units for solving unique metal cleaning problems.

Phillips 3463 Touhy Avenue • Chicago 45, Illinois
MANUFACTURING COMPANY
Engineered Metal Cleaning Equipment

In Canada Phillips' equipment is manufactured under license by WILLIAMS TOOL CORP. OF CANADA, LTD., BRANTFORD, ONT.

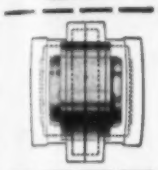
▲ For more details circle NED-957 F4 on enclosed inquiry slip ▲



This gear coupling
SLASHES COSTS
because it's the...

STRONGEST

One-piece sleeve transmits the load. No flanges, bolts . . . more tooth contact. Carries bigger loads at higher speeds . . . has longer service life.



SMALLEST

⅜ usual size, ½ usual weight. Lower moment of inertia. Allows more compact designs . . . increases life of shafts, bearings, armatures.

SIMPLEST

Only 7 parts. Assembled, uncoupled in *seconds*. Reduces assembly time . . . speeds-up alignment checks . . . eliminates corrosion problems.

Standard sizes ⅜ to 6, HP 4 to 600 per 100 RPM. Specials. Distributors in principal cities. Send for CATALOG. Sier-Bath Gear & Pump Co., Inc., 9240 Hudson Blvd., North Bergen, New Jersey.

Also Mfrs. of Precision Gears & Rotary Pumps

Founded 1905 Member A.G.M.A.

Sier-Bath
Flexible
GEAR COUPLINGS

▲ For more details circle NED-958 F4 on enclosed inquiry slip ▲

LOW-COST VENTILATION
with this versatile "package" fan!

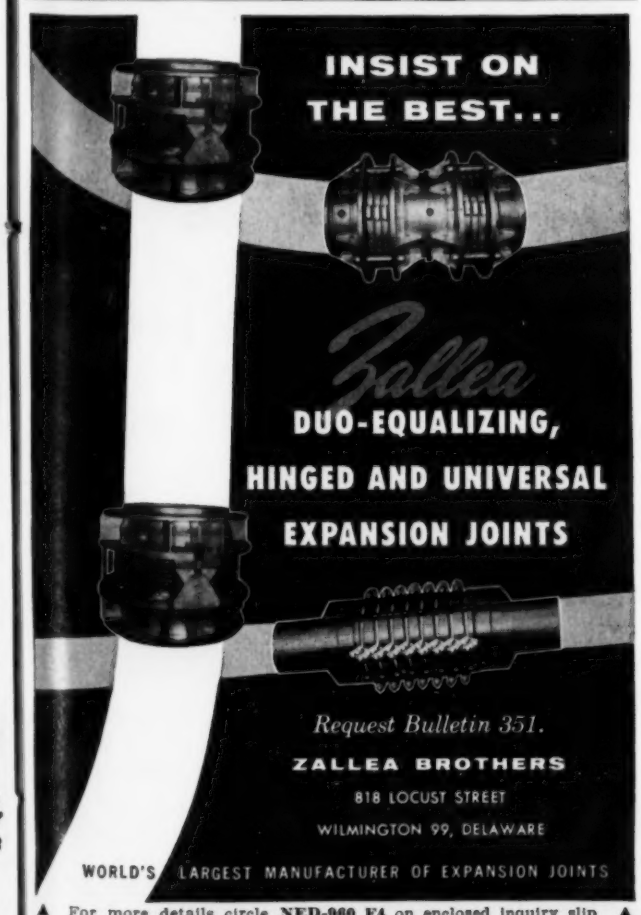
Light-weight
Adjustable Capacity
Non-overloading

"Buffalo" BELTED VENT SET

If you need 500 to 20,000 cfm of quiet ventilation in an easily installed indoor-or-outdoor fan, the Belted Vent Set is your answer! It's lightweight and compact—requires no expensive foundation. It's efficient and very simple to maintain—and cannot be overloaded regardless of duct length. Special protective coatings and metals can be provided for corrosive industrial applications. Ventilate your plant, warehouse or offices with these versatile, practical fans and enjoy years and years of economical service. Write for Bulletin 3720A for all details!

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

▲ For more details circle NED-959 F4 on enclosed inquiry slip ▲

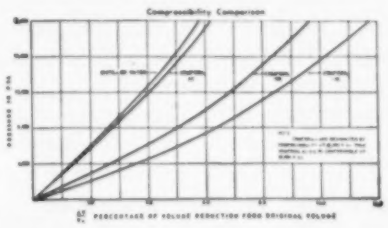


▲ For more details circle NED-960 F4 on enclosed inquiry slip ▲

New Processes & Materials

COMPRESSIBLE LIQUIDS for cushioning applications

Applicable for cushioning and in hydraulic systems, Wales Comproils are compressible liquids which have lubricating properties. They are compressible only at high pressures. Illustration shows compressibility of three of the liquids with distilled water as a standard, where type 118 has a compressibility of more than 11 per cent at 20,000 psi. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.



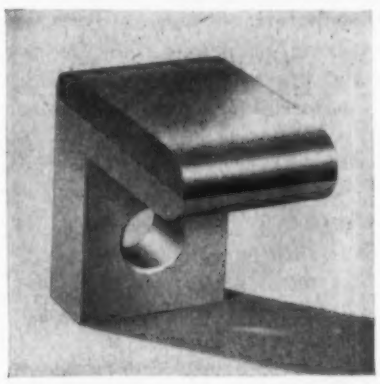
▲ For more details circle NED-961 F4 on enclosed inquiry slip ▲

QUICK-DRYING ENAMEL dries to touch in 20 minutes

When applied as directed to wood, concrete, terrazzo, magnesite and mosaic tile floors and walls, or with proper primer to metal, Quick-X enamel-type coating will dry to the touch in 20 minutes. Coating has wax-like gloss, is tough and is unaffected by cleaning compounds, soaps and detergents. It resists grease, oil, gasoline, alkalies and salt water. Paint is made in five colors in addition to black, white and clear. Application can be with brush, applicator or roller in glossy or nonslip formula. It is packed in quarts, gallons and drums. Made by **Steelcote Mfg. Co.**, Dept. 1-A, 3418 Gratiot St., St. Louis 3, Mo.

▲ For more details circle NED-962 F4 on enclosed inquiry slip ▲

ELECTRICAL CONTACTS with copper-graphite facings



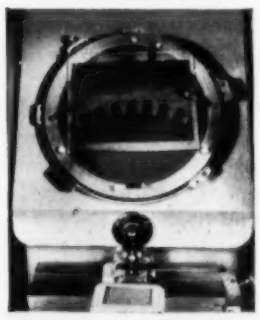
High electrical conductivity and mechanical strength are characteristics of electrical contacts faced with Gibsiloy UC-5 and UC-7, copper graphite materials made by powder metallurgy. Heavy currents can be handled without contacts sticking. Materials have self-lubricating properties and freedom from galling and excessive wear under extreme use. Photo shows UC-7 faced contact used in a Westinghouse starting contactor for diesel electric locomotive. Made by **Gibson Electric Co.**, 8357 Frankstown Ave., Pittsburgh 21, Pa.

▲ For more details circle NED-963 F4 on enclosed inquiry slip ▲

NEW CONCEPTS IN FINE-PITCH GEAR SUPPLY!

RYNEL

GEARS WITH A PEDIGREE



DESIGNERS AND SUPPLIERS
Electronic
Instrument
Communication
Navigation
Power Tool
and
Appliance
FINE-PITCH GEARS

Inspection Laboratory Assures Precision Performance

A complete record of precision specifications from blanks to finished teeth is maintained on all Rynel gears. Each operation is checked by skilled gear inspectors in a completely modern inspection laboratory. Roll, tooth profile, spacing, lead, concentricity . . . it's all down in the record so you can be sure of precision to the exact degree in your fine-pitch gear performance. Specify Rynel Gears for your exacting fine-pitch requirements. They're pedigreed for your performance. Send Blueprints to Rynel Engineers for proposal or Design Suggestions.

A Rynel Engineer will visit you the same day you call.

RYNEL CORPORATION
Phone Sterling 4440
302 Miller Street
Sterling, Illinois

Chicago LOngbeach 1-7111
3050 N. Central Avenue
Chicago 34, Illinois

Spur, Helical, Worm, Worm Gear, Internal Segment, Ratchet, Straight Bevel Gears

▲ For more details circle NED-964 F4 on enclosed inquiry slip ▲

If your problem is high speed coating of paint, varnish, glue, latex, etc. — POTDEVIN, with sixty years experience in coating equipment design is sure to come up with the solution.

Illustrated is just one of hundreds of special machines. It automatically labels cylindrical paper tubes. Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We either have or will build the machine for you.

ESTABLISHED IN 1893 POTDEVIN
POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

▲ For more details circle NED-965 F4 on enclosed inquiry slip ▲

a new look at compressors

*simple
*compact
*direct drive
*valveless
*vibrationless
*steady flow

If you've never considered the advantages of Fuller Rotary Compressors and Vacuum Pumps, now is the time to do so. For instance, they can be placed almost anywhere out of the way, because their vibrationless, rotary action permits, for example, balcony installation without heavy foundations. Because they operate by direct drive, you eliminate the initial and upkeep costs, as well as transmission losses incident to gear and belt drives. General maintenance costs are kept to a minimum.

Because Fuller Rotaries compress without reciprocating motion, you get a non-pulsating air stream. They are extremely compact for the volume delivered; sizes to deliver up to 3300 cfm. free air, for pressures up to 125 psig. Write today to the Fuller Company, Catasauqua, Pa. for literature and engineering data.

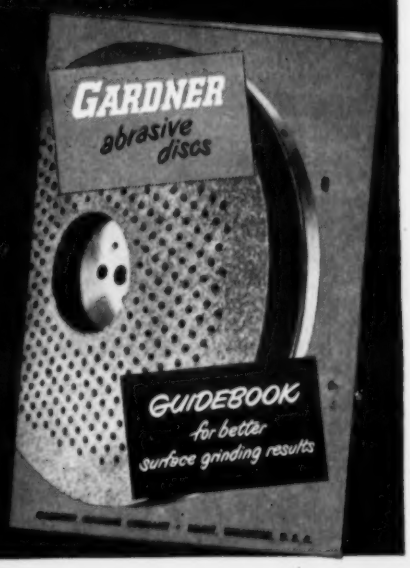
C-251
9690

Fuller Pioneers of high-efficiency vane-type rotary compressors

FULLER COMPANY, CATASAUQUA, PA.
Branch Offices
Chicago-San Francisco-Los Angeles-Seattle-Birmingham

▲ For more details circle NED-966 F4 on enclosed inquiry slip ▲

Get these facts on how to select and use abrasive discs for better grinding and lower cost



54 pages of practical...up-to-date helpful data!

GARDNER MACHINE COMPANY
460 Gardner St., Beloit, Wisconsin

119A

▲ For more details circle NED-967 F4 on enclosed inquiry slip ▲

Precision Paper Products

CAN WE SERVE YOU?

TUBE SHAPES AT A SAVING TO INDUSTRY

SONOCO makes tubes by the spiral, parallel and drawn processes now in use for:

Protective packaging
Electrical fuse tubes
Drug cans
Mailing tubes
Candle tubes
Paper cores
Linoleum and rug cores
Textile paper carriers
Fireworks tubes
Warm air ducts
Concrete column forms
Thread protectors
Oil filter tubes
Containers
Electric socket liners
Shopping bag handles
and many other items!

*LENGTHS—any length that can be shipped.
*DIAMETERS—1/8" to 36" I.D.
*WALL THICKNESSES—from single paper sheet to almost any thickness desired.
*FINISHES—smooth, rough, ground, flocked, colored throughout or wrapped with parchment, cellulose or novelty paper and with inside liners of plastic, glassine, or cellulose. Tubes can be impregnated, perforated and made with metal ends or lacquered tips and printed inside and outside.

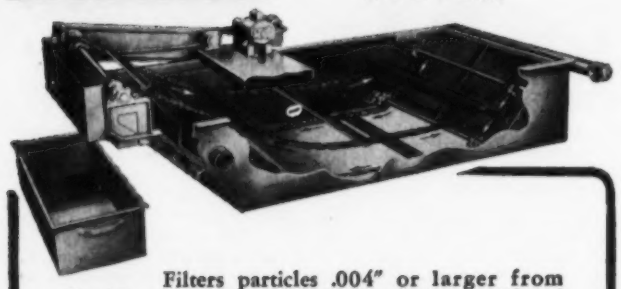
Our complete laboratory service will consider any problem.

SONOCO PRODUCTS COMPANY
MAIN OFFICE—HARTSVILLE, S. C.
MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS. PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC
MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.
DEPENDABLE SOURCE OF SUPPLY

▲ For more details circle NED-968 F4 on enclosed inquiry slip ▲

New! Filters Small Solids...

Delpark Settling and Filter SYSTEM



Filters particles .004" or larger from liquids of varying viscosity containing solids of different particle sizes and weights.

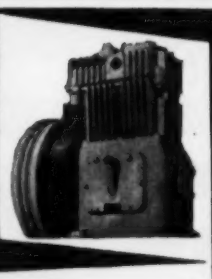
Power-driven expeller flights, solid and of special bristle brushes, sweep solids from the screen and settling area up a ramp at the opposite end. A special cleaning device removes the solids from the flights before their return to the filter. Screens easily removed for manual cleaning. A blank metal sheet replaces the screen during cleaning.

WRITE FOR NEW BULLETIN

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

▲ For more details circle NED-969 F4 on enclosed inquiry slip ▲

NEW QUINCY COMPRESSORS WITH safe-Q-lube



For Greater Dependability . . . Lower Maintenance, Quincy Compressors are now equipped with *New* safe-Q-lube to automatically open the intake valve—unload the compressor—whenever the lubricating oil is low. When the compressor is unloaded, lack of air signals operator.

Safe-Q-lube also operates Quincy's Loadless Starting which protects motor and drive from starting overloads. And safe-Q-lube does it with 62% fewer parts for lower maintenance and replacement.

There's a Quincy Compressor for your job. Two new models—Model 255 air-cooled single-stage duplex cylinder 55 CFM piston displacement and Model 350 air-cooled two-stage 50 CFM piston displacement. Quincy has an even more complete line of 21 models in sizes from 1 to 90 CFM.

Write for new Quincy slide card illustrating safe-Q-lube. Write Quincy Compressor Co., Dept. NE-36, Quincy, Illinois.

Quincy COMPRESSOR
Makers of the World's Finest Air Compressors

QUINCY COMPRESSOR CO.
QUINCY, ILLINOIS
Branch Offices: New York • Philadelphia • Atlanta • Detroit • Chicago • St. Louis • Dallas • San Francisco

▲ For more details circle NED-970 F4 on enclosed inquiry slip ▲

New Literature & Catalogs

Silent Chain Drives

Link-Belt Co.—88-page engineering data book 2425 gives comprehensive data on design, selection and application of silent chain drives for a wide variety of industrial applications. Chain is available for service ranging from fractional horsepower requirements to steel mill drives transmitting thousands of horsepower. It combines the flexibility and quietness of a belt with the positive action of gears. Installation, maintenance and lubrication procedures are among the subjects given detail coverage.

▲ For more details circle NED-971 F4 on enclosed inquiry slip ▲

Extruded Plastics Facilities

Sheffield Plastics, Inc.—20-page illustrated bulletin depicts extruded plastics design, development and production facilities. Shop equipment is described. Case histories show how typical problems have been successfully solved. Diagrams show large stock of standard and special extrusion dies available.

▲ For more details circle NED-972 F4 on enclosed inquiry slip ▲

Alloy Steel Economics

"Alloy Steels Pay Off" is title of a 208-page book which illustrates how use of alloy steels as a class is becoming increasingly a more attractive and economically justifiable procedure. Sixty detailed case histories show how use of various alloy steels has saved money for the producer of finished parts, for the user, or for both. Book is available free only on request on your company letterhead to Climax Molybdenum Co., 500 Fifth Ave., New York 36, N. Y.

▲ For more details circle NED-973 F4 on enclosed inquiry slip ▲

Vinyl Sheet Fabrication

Bakelite Co.—40-page illustrated reference booklet "Bakelite Plastics . . Vinyl Rigid Sheets" fully describes forms, properties, fabrication techniques and applications of these materials. Laboratory test data are presented covering properties, and many widely divergent industrial applications are pictured. All the latest fabrication techniques are covered in detail.

▲ For more details circle NED-974 F4 on enclosed inquiry slip ▲

Automatic Staple Tackers

Fastener Corp.—24-page illustrated catalog "Automatic Staple Tackers" gives specifications and application data on many different models of hand stapling machines, ranging from hammer to pneumatically powered types. Attachments and accessories are also covered, in common with varied-purpose staples.

▲ For more details circle NED-975 F4 on enclosed inquiry slip ▲

Large Cap Screws

Standard Pressed Steel Co.—Standard and special heat treated alloy steel cap screws in sizes up to 3-in. diameter and 36-in. long or more are subject of 4-page illustrated bulletin 2002. Bolts are forged to give good grain structure around head and other potential fatigue points. Applications include use in large presses and machine tools.

▲ For more details circle NED-976 F4 on enclosed inquiry slip ▲

Electronic Design & Production

Allied International, Inc., Allied Engineering Div.—"A Story Of Accomplishment" is title of 8-page illustrated catalog covering design, development, production and assembly facilities for the electronics industry. Design for miniaturization is one of the interesting phases of company activity. Catalog also contains brief descriptions of other products such as power supplies, batteries and telecommunications equipment.

▲ For more details circle NED-977 F4 on enclosed inquiry slip ▲

Engineering & Production Handbook

New and hard-to-get as well as the standard data and information needed by machine designers, mechanical engineers, tool designers, shop management and enginering departments are contained in 1911-page illustrated 15th edition of "Machinery's Handbook." This standard reference volume is fully and simply indexed so that any one of the thousands of items in the various sections can be located readily. It is an invaluable aid wherever anything mechanical is designed or constructed. Price is $9.00. Published by Industrial Press, 148 Lafayette St., New York 13, N. Y.

▲ For more details circle NED-978 F4 on enclosed inquiry slip ▲

Ordering Washers?

TAKE ADVANTAGE OF THESE SUBSTANTIAL SAVINGS...

by using WHITEHEAD Stock Washer Dies
1500 SPECIAL SIZE DIES ON HAND

Whitehead makes washers and shims from any metal or special material to your specifications. Thickness from .002" to 3/8".

In stock: S.A.E. standard light, medium, and heavy steel washers; brass and copper, small and large patterns; bolt sizes.

Get this catalog for your files by writing Whitehead at Detroit.

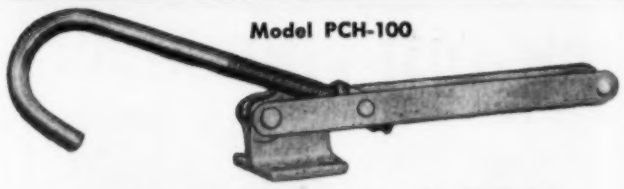
54-2

WHITEHEAD STAMPING CO.
EST. 1903

1669 W. Lafayette Blvd., Detroit 16, Michigan

▲ For more details circle NED-979 F4 on enclosed inquiry slip ▲

Model PCH-100



THIS NEW CLAMP

will simplify and speed your operations requiring pulling action.

This new clamp—a hook clamp—may have the answers to many of your problems—specifically where tension and sustained holding power is needed.

Save physical strength and time—simplify pulling jobs. Originally developed for aircraft industry, this unusual clamp can bring help to many other industries. Maybe yours!

Don't exert human strength; do the job mechanically. You can build up a great pulling force through the toggle action of this Knu-Vise clamp—quickly and easily.

We'll tell you more without obligation. Send for complete information.

Sales offices in principal cities—Teletype DE 49

KNU-VISE PRODUCTS LAPEER MFG. CO.
3062 DAVIDSON ROAD • LAPEER, MICHIGAN
WESTERN DIVISION ON: 422 MAGNOLIA, GLENDALE, CALIF.
CANADIAN DIVISION: HIGGINSON ENGINEERING, HAMILTON, ONT.

▲ For more details circle NED-980 F4 on enclosed inquiry slip ▲

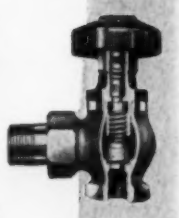
Replace Obsolete Steam-Wasting Units With

illinois SPECIALTIES

Equip your radiators with smooth-acting Illinois Supply Valves and sensitive, steam-tight Illinois Thermostatic Traps.

Improve system operation by replacing thermostatic drip traps with Illinois Float and Thermostatic Traps wherever rapid elimination of condensate is essential.

Illinois Float and Thermostatic Traps are made in three series and for operating ranges from 50 pounds pressure to 25 inches vacuum.



Investigate! Compare! Try Illinois Traps on your worst service and be guided by results!

Write for Bulletins

illinois ENGINEERING ILLINOIS ENGINEERING COMPANY
2039 SOUTH RACINE AVENUE, CHICAGO 8
DIVISION OF AMERICAN AIR FILTER COMPANY, INC.

▲ For more details circle NED-981 F4 on enclosed inquiry slip ▲

SPECIFY *Servisafe* METAL POLE UNITS

for

INDUSTRIAL YARD LIGHTING

THOMPSON "Servisafe" units permit rapid, safe, low cost ground-level luminaire servicing and maintenance. These new metal pole units incorporate a patented disconnecting and lowering mechanism and are available in both single and double arm models. They are suitable for use with single pendant luminaires and for multiple floodlight installations. When double floodlights are used, each can be focused independently for maximum efficiency.

Write for Catalog PB-53 for complete details.

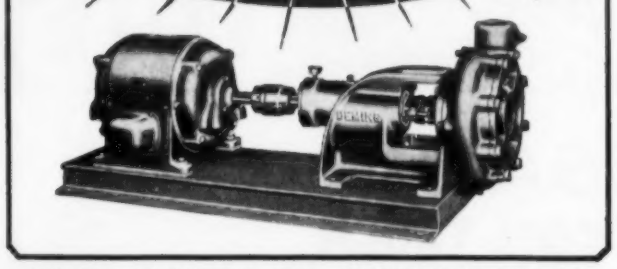
1912-TH

THE THOMPSON ELECTRIC CO.

1138 POWER AVENUE • CLEVELAND 14, OHIO

For more details circle NED-982 F4 on enclosed inquiry slip

NEW **DEMING** CENTRIFUGAL PUMP



WIDE RANGE OF APPLICATIONS

Capacities of Fig. 4011 End Suction Centrifugal Pumps range to 1,000 g.p.m. against heads to 240 feet. Available with electric motor, or equipped with pulley for belt drive, or pump only as specified.

Optional features: Separate liquid end can be cast iron (standard) or made of special metal for handling corrosive liquids. Power end remains standard cast iron construction. Standard, or special stuffing box heads, or mechanical seal construction are optional features. Standard 3-vane, semi-open impeller or special impeller with wiping vanes are optional. Many other important features.

For complete details, write for Bulletin No. 4011

THE DEMING COMPANY

520 BROADWAY • SALEM, OHIO

For more details circle NED-983 F4 on enclosed inquiry slip

When Winter Comes—

Keep Production Moving with

WING DOOR HEATERS

Cold blasts from open doors are stopped in their tracks by Wing Door Heaters, which go into action automatically when the door is opened. The high velocity curtain of warm air keeps working areas comfortable, preventing the chilly drafts from entering. Workers are healthier, happier, keep right on working when doors are open. Learn how easily Wing Door Heaters can be installed in your plant. Write today for a copy of Bulletin DH-1.

L. J. Wing Mfg. Co. 165 Vreeland Mills Rd., Linden, N.J.

For more details circle NED-984 F4 on enclosed inquiry slip

New Processes & Materials

RUST PREVENTIVE
in ½-pt and spray containers

Half-pints and aerosol containers of Penetrol, a clear air-drying oil, are now available for the protection of metal and wood surfaces against rust, corrosion, paint peeling, etc. It was formerly available only in pint, quart, and gallon cans and 5, 30 and 55-gal drums. Material stops rust action without removing the rust, eliminates discoloration from rusting nail heads and acts as a cleaner and protector for chrome, brass, copper and aluminum. Made by **Flood Co.**, Dept. NED, Hudson, O.

For more details circle NED-985 F4 on enclosed inquiry slip

PHOSPHATIZING PROCESS
can be used before silicone painting

New process built around Divobond spray-applied compound makes it possible to phosphatize steel and still apply silicone finishes. It is thus possible to phosphatize and silicone paint such products as radiators, furnaces, electric motors and heaters. Divobond can also be used as a general-purpose cleaning, rustproofing and paint-adhering process. Samples of the product can be obtained or readers can send in test panels for coating. Made by **Diversey Corp.**, Divobond Dept., Dept. C, 1820 Roscoe St., Chicago 13, Ill.

For more details circle NED-986 F4 on enclosed inquiry slip

STICK LUBRICANT
for various metalworking uses

Such diverse metalworking operations as grinding, tapping, drilling, pipe cutting, metal spinning, sawing and sanding are facilitated with Hyperstik lubricant,

supplied in stick form measuring 2¼ in. diameter and 8 in. long. Product does not flow easily, is noncorrosive and remains stable in storage indefinitely. The 8-in. stick is contained in a 9-in. tube, the extra 1-in. serving to use up sticks which become too short to handle. Made by **Destiny Products Co.**, Dept. A, 2970 W. Grand Blvd., Detroit 2, Mich.

For more details circle NED-987 F4 on enclosed inquiry slip

now-
MEASURE, CONTROL LIQUID DENSITY
continuously and automatically with the

PRINCO
Since 1910

Densitrol

Process industries will welcome the new DENSITROL—the precision instrument that gives a continuous reading of density in flowing liquids such as sugar syrups, brine, acids. DENSITROL electrical indicators or recorders can be located remote from the sampling chamber itself. If desired, DENSITROL can be linked with control mechanisms for automatic regulation. For information on temperature and pressure ranges, calibrations, and other specifics, request Bulletin W-3.

PRECISION
THERMOMETER & INSTRUMENT CO.
1434 Brandywine Street, Philadelphia 30, Pa.

Makers of precision-built thermometers, barometers, hydrometers, gauges, indicators, mercury in glass thermo-regulators.

For more details circle NED-988 F4 on enclosed inquiry slip

Need Rails—Switches—Frogs—Guard Rails or Track Tools? For best selections and prompt deliveries—try FOSTER—shipments of most items can be made from stocks in our five nationwide warehouses.

RAILS—New and Relaying Foster stocks are being replenished daily. Any items we did not have last week, we'll probably have next week. We match specifications and sizes to meet all your requirements on any job, new installations or replacements. *Call on Foster for all your needs for Industrial Track Equipment and Supplies.*

Write for Track Equipment Bulletin NE-6

L. B. FOSTER CO.

CHICAGO 4, ILL. HOUSTON 2, TEX.
PITTSBURGH 30, PA. NEW YORK 7, N.Y.

For more details circle NED-989 F4 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN

SEND FOR BULLETIN 110

● It's easy to get the right cylinder for even the most special jobs when you use Hannifin's big hand-book on HYDRAULIC CYLINDERS. 52 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 12 standard bore diameters, 1" to 8"... any length stroke you specify ... 11 standard mounting styles ... standard, double end or heavy duty (2:1) piston rods ... available with adjustable cushions ... pressures to 1500 lbs. per sq. in. Send for Bulletin 110. Hannifin also builds custom cylinders in any quantity to special designs. *Bring us your cylinder problems!*

HANNIFIN

1127 S. Kilbourn Ave., Chicago 24, Ill.

Air and Hydraulic Cylinders • Presses • Air Control Valves

For more details circle NED-990 F4 on enclosed inquiry slip

Now's the time to discard costly, obsolete methods ... replace with FEDERALS for

more profitable presswork!

FEDERAL DIAL FEED PRESSES

No. 7 Dial Feed Capacity, 80 tons

Modernize with new Federal Dial Feeds and watch your production go up, and costs down! Rugged, precision-built, versatile, this press does three to five times the work of a standard press; cuts downtime, reduces accidents, eliminates expensive equipment. Finest materials and workmanship. Sizes, 6 to 80 tons. Automatic feed and ejectors, if desired.

Write for new Catalog

THE FEDERAL PRESS COMPANY
506 Division St., Elkhart, Ind.

For more details circle NED-991 F4 on enclosed inquiry slip

▲ For more details circle NED-992 F4 on enclosed inquiry slip ▲

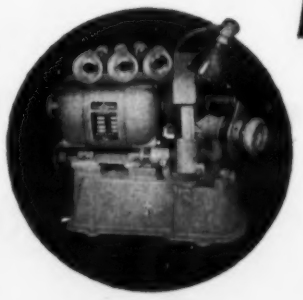
DO YOU KNOW THESE FACTS ABOUT PRE-FINISHING?

Know how to keep your finishing process from becoming outdated? Switch to prefinished ENAMELSTRIP. A few facts about this pioneer process will show you it pays to finish the modern, ENAMELSTRIP way:

- Coats and colors metal before fabricating.
- Eliminates costly operations.
- Comes precision-slit to your specifications in a choice of metals.
- Non-anodized organic finish, withstands all Fabricating stresses.
- Finished in one, or two colors (one on each side).

GET ALL THE FACTS ON ENAMELSTRIP in our new *full-color bulletin*. Send for yours today.

THE COATED COIL CORPORATION
507 West 30th Street, New York 1 • LOngacre 5-3161
▲ For more details circle NED-993 F4 on enclosed inquiry slip ▲



THE ONLY DRILL GRINDER SO FAST & EASY TO OPERATE!

Only the *Black Diamond* Drill Grinder lets you sharpen small drills accurately by such a simple grinding method. Fast, easy operation. No complicated adjustments. Compare these outstanding features:

- Exclusive "positive-positioning" assures accuracy!
- No skill required by operator!
- Both lips ground in one operation!
- Web thinning made easy with special attachment!

Get all the details! Send for folder!

BLACK DIAMOND SAW & MACHINE WORKS, INC.
72 North Ave., Natick, Mass. OLympic 3-4480
▲ For more details circle NED-994 F4 on enclosed inquiry slip ▲

New Literature & Catalogs

Respirators, Goggles, Nose Masks

H. S. Cover—Brief description, prices and illustration are given in 2-page data sheet on Dupor respirators, smoke masks and goggles. Products are designed to provide cool, comfortable breathing in smoky, dusty and fume-laden atmospheres.

▲ For more details circle NED-995 F4 on enclosed inquiry slip ▲

Stock Relay Catalog

Leach Relay Co.—44-page loose-leaf catalog illustrates and describes stock relays and suggests some of the many modifications which can be made to accommodate special requirements. The five sections list midgets, circuit controls, special purpose units, radio and high frequency relays, aircraft relays and contactors.

▲ For more details circle NED-996 F4 on enclosed inquiry slip ▲

O-Ring Seal Application

Minnesota Rubber & Gasket Co.—16-page brochure documents production and application of rubber O-ring seals. Included are sections on end products; O-ring sizes, dash numbers and variable tolerances; dimensional data for installation; drawings of correct and incorrect installations; and methods of utilizing O-ring sealing properties.

▲ For more details circle NED-997 F4 on enclosed inquiry slip ▲

Materials Handling Equipment

Palmer-Shile Co.—Among new products described in 40-page catalog on materials handling equipment are steel boxes with lap joints, a stand and reel for handling steel coils, nesting type stacking box and skid box with a side door. All equipment shown is made of metal, wood or combination and is used for pick-up, loading, moving, dumping or storage.

▲ For more details circle NED-998 F4 on enclosed inquiry slip ▲

Tube Bending Press

Pines Engineering Co.—Mechanical features and operating advantages of new 20-ton hydraulic tube bending press are reviewed in illustrated 4-page bulletin. Press is built to handle pipe and tube sizes up to 2 in. OD by 0.083-in. wall.

▲ For more details circle NED-999 F4 on enclosed inquiry slip ▲

Electrical Modernization of Plants

Westinghouse Electric Corp.—"Compete or Collapse" is title of 16-page booklet on electrical modernization in industrial plants. It points out that the first step in modernization must be efficient distribution of electrical power. Principal elements of modern system are described and illustrated.

▲ For more details circle NED-1000 F4 on enclosed inquiry slip ▲

Timers Vital to Automation

Eagle Signal Corp.—Application of timers in the design of machines for automatically handling and machining or processing parts and materials is effectively discussed in 12-page booklet "Timers—A Vital Part in Automation." Timers are classified into reset or repeating cycle types and cataloged in reference to their principal functions.

▲ For more details circle NED-1001 F4 on enclosed inquiry slip ▲

Gaskets & Accessories

United States Gasket Co.—Chemiseal gaskets and accessories for all types of chemical resistant piping and equipment are cataloged in bulletin TG-953. Gaskets are impervious to all chemicals excepting molten alkali metals, fluorine at elevated temperatures and chlorine trifluoride.

▲ For more details circle NED-1002 F4 on enclosed inquiry slip ▲

Magnetic Centrifugal Pump

Fostoria Pressed Steel Corp.—Centrifugal pump described in 4-page bulletin and known as the Dynapump is fractional horsepower unit driven by rotating magnetic field instead of usual drive shaft. Motor and pump are in one sealed unit. Characteristics, specifications and performance are covered.

▲ For more details circle NED-1003 F4 on enclosed inquiry slip ▲

Electrical Power Equipment

Sorenson & Co.—32-page illustrated catalog No. 254 shows complete line of alternating and direct current equipment. Operating principles and specific data are provided for all units. Coverage includes voltage regulators, electronic frequency changers, inverters and magnetic-amplifier direct current sources.

▲ For more details circle NED-1004 F4 on enclosed inquiry slip ▲

THIS MACHINE TOOL CONTROL TRANSFORMER

IS ENGINEERED TO PROVIDE THE REGULATION YOU NEED

This New Series Acme Electric Machine Tool Control Transformer more adequately withstands the low power factor and current surges when solenoids, contactors and switches of machine tool controls go into action. Sturdily constructed to provide adequate capacity for momentary overloads. Compare regulation curves. Write for Bulletin CT 194.

ACME ELECTRIC CORPORATION
MAIN PLANT: 306 WATER STREET • CUBA, N. Y.
West Coast Engineering Laboratories:
1375 W. Jefferson Blvd., Los Angeles, Cal.
In Canada: Acme Electric Corp. Ltd. • 50 North Line Rd. • Toronto, Ont.

Acme ACME Electric TRANSFORMERS
▲ For more details circle NED-1005 F4 on enclosed inquiry slip ▲

Quick, Safe and Low Cost way to handle . . . . COILS

SABIN COIL TRUCK

Wire or Strip Coils, Box Strapping, Wheels, Tires, Lathe Chucks or Face Plates, etc.

TO LOAD, you run truck up to article, passing arm through hole, and pull back on handle—that's all. Third or Follower Wheel makes travel easy and safe.

WRITE FOR BULLETIN
The Sabin Machine Co.
6540 Carnegie Ave.
CLEVELAND 3, OHIO

OTHER SABIN TRUCKS: Barrel, Keg, Box and Package Trucks; Tote Pan, Carboy, Shop and Special Trucks.

▲ For more details circle NED-1006 F4 on enclosed inquiry slip ▲

MINUTES—NOT HOURS!

ACCURATE ANGULAR GRINDING SET-UPS

Magna-Lock electro-magnetic SINE CHUCKS

Single or compound angles. Easy to use. No dials, no scales. Standard gauge blocks insure utmost accuracy. Work held without distortion. Rugged, precision quality construction. Table of Constants furnished.

Magna-Lock magnetic chucks and devices

Get details, DEPT. ND-64.
MAGNA-LOCK, INC.
BIG RAPIDS, MICHIGAN, U. S. A
▲ For more details circle NED-1007 F4 on enclosed inquiry slip ▲

ANOTHER **FLASH-O-LENS** AT WORK
INSPECTING FILAMENT GUIDES AT
Celanese Corporation

Lighting and *magnifying* the inspection area, FLASH-O-LENS speeds and simplifies the checking of filament guides on the coning machines at the Narrows, Va., plant of Celanese Corporation of America. That's just one of the many, many jobs on which FLASH-O-LENS is being used because its built-in bulb gives bright illumination —and its accurately ground lenses assure sharply detailed enlargement.
Battery and plug-in models available—priced from $10.95. Write for literature and prices.

E. W. PIKE & CO., Inc.
492 NORTH AVENUE ELIZABETH 3, N. J.
▲ For more details circle NED-1008 F4 on enclosed inquiry slip ▲

the BEST TOOL for every cleaning job
an EXCELLENT FIRE PRECAUTION too

HYPRESSURE
Jenny
STEAM CLEANER

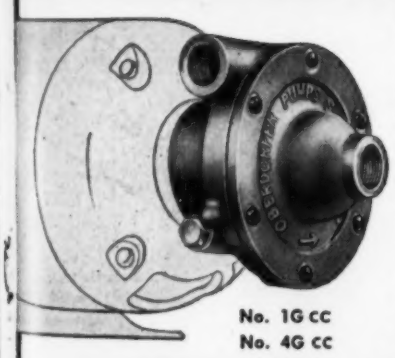
New Series "1800" Jenny, ideal for industry's heavy-duty cleaning jobs.

As a general maintenance tool JENNY will save you up to 90% in man-hours and plant cleaning costs by removing oils, grease, muck and grime from machinery, conveyors, floors, walls, skylights, semi-finished products, tools and equipment, *10 times faster—and better* than bucket, brush, and scraper, volatile solvents, or other outmoded cleaning methods. And you'll realize additional savings through the stepped-up production which results when mechanics work with clean tools and equipment.
Add to this the fact that by JENNY steam cleaning you are eliminating the oils, grease, and other inflammables that spark fires and spread them, and you can see why a *JENNY in your plant is one of the best methods of fire precaution you can take.*

Send for Catalog today for full facts.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
Serving Since 1892
P.O. BOX 84 CORAOPOLIS, PA.
▲ For more details circle NED-1009 F4 on enclosed inquiry slip ▲

Close coupled, centrifugal, motor driven
OBERDORFER BRONZE PUMPS



No. 1G CC
No. 4G CC

1G cc is complete motor-pump unit with 1/12 H.P., 3450 RPM, 110 volt, A.C. ball bearing thermal overload motor. Motor frame Nema 42 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

4G cc is complete motor-pump unit with 1/3 H.P., 3450 RPM, 110 volt, A.C. thermal overload motor. Motor frame Nema 56 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

OVERALL DIMENSIONS—Motor and Pump Unit

Pump No.	Height	Width	Length	Suction	Discharge
1G cc	5"	4¾"	9"	⅜ N.P.T.	⅜ N.P.T.
4G cc	6⅝"	6 5/16"	11¼"	¾ N.P.T.	½ N.P.T.

CAPACITIES—Gal. per min. —3450 RPM-Foot Water Head

Ft. Water	0	5	10	15	20	25	30	35
1G cc	7	6½	5	4	1½	—	—	—
4G cc	23	22	20	18	15	12	8	2

Oberdorfer Foundries, Inc., Ind. Pump Div.
246 Thompson Rd. Syracuse, N. Y.
▲ For more details circle NED-1010 F4 on enclosed inquiry slip ▲

New Processes & Materials

NEOPRENE V-BELTS have built-in static conductor

Neoprene carcass and cover of Super Gripbelts render them oilproof, resistant to heat deterioration and give them high strength in compression section. Cord construction minimizes stretch, stabilizes length and assures flexibility and lateral rigidity. A built-in static conducting compound makes them nonsparking and explosionproof. Four series of belts have pitch lengths ranging from 27 to 360 in. Made by **Browning Mfg. Co.,** 1940 Browning Dr., Maysville, Ky.

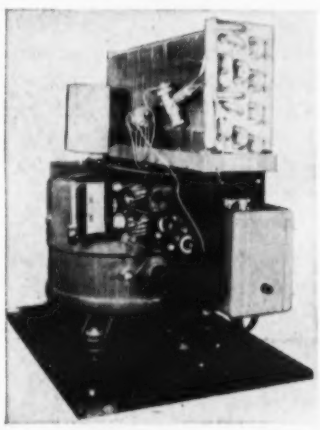
▲ For more details circle NED-1011 F4 on enclosed inquiry slip ▲

METAL CLEANING COMPOUND for pressure-spray washing machines

Nonfoaming action is featured by Oakite No. 161 alkaline-type cleaning compound for aluminum, steel and other metals for use in pressure-spray washers. Powdered material is completely soluble in water and is free-rinsing. It is used in concentrations of from ½ to 2 oz per gallon of water at temperatures ranging from 160 to 185° F. Boiling-in is not required. Made by **Oakite Products, Inc.,** 132G Rector St., New York 6, N. Y.

▲ For more details circle NED-1012 F4 on enclosed inquiry slip ▲

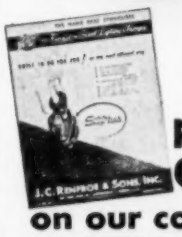
CONDENSATION PREVENTIVE in tape form for cold surfaces



Black, rubbery No. 165 insulation tape will not sweat when used on cold water lines and air conditioning and refrigeration equipment. It is composed of rubberized asphalt, cork and asbestos and can also be used as a gasket for metal flanges, wood and glass, and as a sound deadener or cushioner. Tape is nonvolatile, odorless, resistant to water and adheres well to wood and metal. Flexibility, adhesion and cohesion is retained at temperatures from −20 to 158° F. Widths from 1 to 7 in. are available in ⅛-in. thickness, packed flat or in rolls. Made by **Presstite Engineering Co.,** Dept. NED, 3798 Chouteau Ave., St. Louis 10, Mo.

▲ For more details circle NED-1013 F4 on enclosed inquiry slip ▲

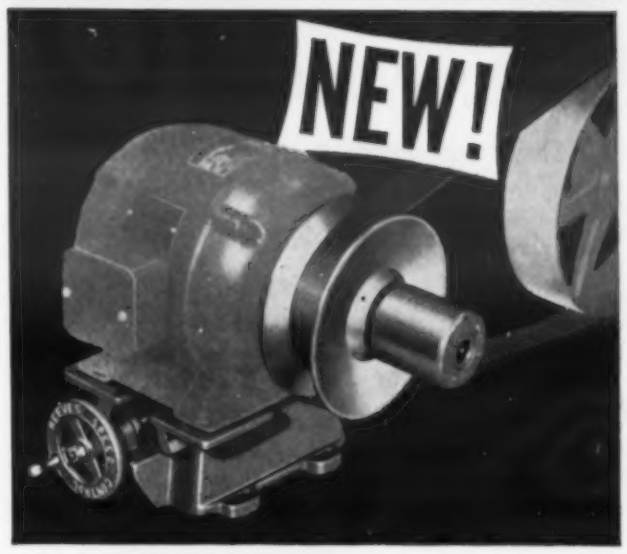
THE NAME THAT SYMBOLIZES
RENFROE
THE *Finest* IN *Steel Lifting Clamps*



12 page Catalogue FREE
on our complete line of Lifting Clamps

- Safety Snap Lock Clamp
- Lock on in any position
- Lock off in any position
- Maximum Speed and Safety
- From 1 to 20 Ton Sizes
- Exceptionally light in weight
- Safety Factor 5 to 1
- The toughest clamp ever built

J. C. RENFROE & SONS, INC.
JACKSONVILLE, FLORIDA
▲ For more details circle NED-1014 F4 on enclosed inquiry slip ▲



REEVES *Completely new redesigned* **MOTOR PULLEYS**
Smaller units—More HP!

Check all these new REEVES features
1. New, smaller disc assemblies—engineered for new or old NEMA Motors.
2. New spiral-groove lubrication for rust-free, trouble-free service.
3. One-point lubrication when unit is stopped *or in operation.*
4. Superior base construction for greater rigidity and strength, reduced vibration and noise.

Write today for complete details. Specify ND10-V545.
REEVES PULLEY COMPANY • COLUMBUS, INDIANA
▲ For more details circle NED-1015 F4 on enclosed inquiry slip ▲

ROLLING **Faultless** ENGINEERED TRUCK CASTERS
CUT HANDLING COSTS

NEW! DRAWN STEEL WHEELS FOR LONGER WEAR

800 Series Double Ball Bearing Swivel Plate Caster with Steel Wheel

Faultless Casters equipped with the new Drawn Steel Wheels provide (1) *longer life,* (2) *greater efficiency,* (3) *at minimum maintenance* and, thus, (4) *lower operating cost per mile.*

Faultless Steel Wheel Casters help industry reduce overhead by maintaining fast, fluid production lines. These precision-made wheels are machined to tolerances typical of fine tools and like any quality equipment, are the best investment for long uninterrupted service. Write for Bulletin

FAULTLESS CASTER CORPORATION
Dept. NE-9, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.
▲ For more details circle NED-1016 F4 on enclosed inquiry slip ▲

T-J toughness means more work between grinds... LOWER DIE COSTS!

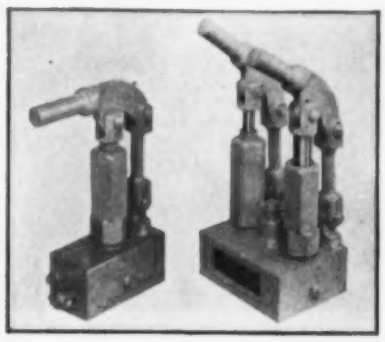
LARGEST SELLING CUTTERS FOR TOUGH DIE STEEL

Be sure of *top performance* in die sinking milling cutters . . . specify T-J! They're preferred everywhere today in die and forge shops . . . because T-J Cutters are *extra sturdy* . . . you can raise the feed!
Designed for speed, accuracy and long life . . . hold a sharp edge longer on job after job . . . less breakage! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes to *reduce your* die costs. Send for new catalog 4-153. The Tomkins-Johnson Co., Jackson, Michigan.

T-J
TOMKINS-JOHNSON
MOTORS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS
▲ For more details circle NED-1017 F4 on enclosed inquiry slip ▲

HAND HYDRAULIC PUMP

Single and Double Designs to 20,000 Psi
With or without Reservoir



Standard Reservoirs 70- 160- 910 Cu. In. Capacity

Interchangeable Pistons ⅜-½-¾ Inch

1-Inch Piston (Special)

Pipe connections ¼" N.P.T.

Handle length is 18 inches.

Unit can be bolted or welded into position.

"We specialize in hand pump units to operate in temperatures from minus 65 F to plus 160 F and with any capacity reservoirs required."

The single pump with ½" or ¾" piston now available in stainless steel.

WILLIAM S. PINE
1635 E. 22nd St., Los Angeles 11, Calif.

▲ For more details circle NED-1043 F4 on enclosed inquiry slip ▲

NEW! Greater Capacity! Smaller Size! Longer Life!

A revolutionary development in industrial gearing! Foote Bros. applies its aircraft quality gear manufacturing experience to its industrial gear production...to give you greater capacity and longer life in less space!

FOOTE BROS. Duti-Rated LIFETIME GEARING

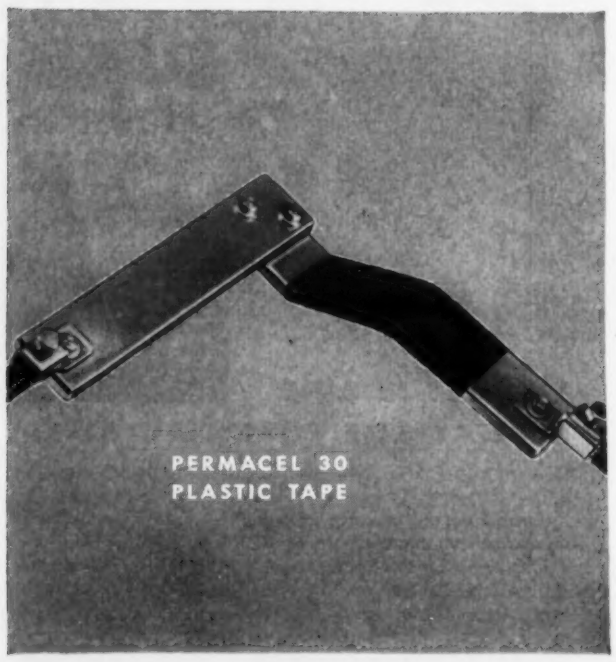
Want to learn how these better gears will work in your product? Write today for complete details!

FOOTE BROS. GEAR AND MACHINE CORPORATION
4545 S. Western Boulevard, Dept. NE, Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

▲ For more details circle NED-1044 F4 on enclosed inquiry slip ▲

For Insulating Bus Bars



PERMACEL TAPES

Find out how you can use self-sticking tape...write Permacel Tape Corporation, New Brunswick, N. J.

▲ For more details circle NED-1045 F4 on enclosed inquiry slip ▲

New Literature & Catalogs

Flush Latches

Hartwell Co.—48-page illustrated catalog describes complete line of flush latches. Dimensions, assembly, installation, combinations and price listings are among the data provided.

▲ For more details circle NED-1046 F4 on enclosed inquiry slip ▲

Controlled Heating System

Illinois Engineering Co.—16-page illustrated bulletin 540 gives engineering data on Selectotherm system of interior heating. How steam circulation is automatically controlled over a wide range of pressures and temperatures to assure ample heat with minimum of steam consumption is detailed. System components are explained and installation data are given.

▲ For more details circle NED-1047 F4 on enclosed inquiry slip ▲

Jig & Fixture Components

Reid Tool Supply Co.—52-page illustrated catalog describes enlarged line of jig and fixture components, also other accessories and equipment for tool rooms and machine designers.

▲ For more details circle NED-1048 F4 on enclosed inquiry slip ▲

Vertical Materials Conveyor

Lamson Corp.—12-page illustrated catalog S-700 describes a versatile automatic vertical conveyor system designed to handle floor-to-floor traffic of file folders, mail, books, periodicals or other volume small items in multistory plants or buildings. Economy and time saving features of the equipment are covered.

▲ For more details circle NED-1049 F4 on enclosed inquiry slip ▲

Geared Electric Motors

Belgian Electric Sales Corp.—16-page illustrated bulletin CC-14A gives prices, dimensions, operating characteristics and other engineering data on a complete line of Belgian-built ACEC-SADI gearmotors. Motors are built to NEMA specifications and are available in ranges from ⅓ to 15 hp.

▲ For more details circle NED-1050 F4 on enclosed inquiry slip ▲

Gas Regulators

Air Reduction Sales Co.—36-page illustrated catalog 806 describes and gives operating data on complete line of gas regulators for oxygen, argon, acetylene, nitrogen, hydrogen, propane, natural gas and helium. Cylinder, manifold and pipeline types are covered.

▲ For more details circle NED-1051 F4 on enclosed inquiry slip ▲

Ratchet Lever Hoists

Coffing Hoist Co.—8-page illustrated bulletin SP describes line of ratchet lever hoists including both roller and coil-chain models with capacities ranging from ¾ to 15 tons. Construction features are described and specifications are given.

▲ For more details circle NED-1052 F4 on enclosed inquiry slip ▲

SKINNER
V2 STAINLESS STEEL SOLENOID TWO-WAY CUT-OFF VALVES

. . . for Air, Water, Inert Gases, Oils & Other Media

Miniature Skinner V2 Stainless Steel Valves are competitively priced, yet skillfully engineered to highest quality standards. Stainless steel internal parts, leakproof operation, and direct mounting make them ideal for a wide range of applications.

V2 Valves are small (weigh 9 ozs.), yet give performance measured in millions of cycles. They feature "fail-proof", bubble-tight shut-off: pressure and spring combine to snap valves to normal position at the instant current goes off.

SPECIFICATIONS: Type: Two-Way, Normally Open or Normally Closed; Pressure Range: 0-250 PSI; Orifice Diameter: 3/64" to ⅛"; Pipe Size: ⅛" or ¼" NPT; Voltage: All common AC, DC voltages. *Write for Bulletin 534.*

SKINNER ELECTRIC VALVES — *Skinner* ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Ave., New Britain, Conn.

▲ For more details circle NED-1053 F4 on enclosed inquiry slip ▲

develops a new approach to MECHANICAL SURFACE FINISHING

ROTO-FINISH has now extended the original barrel finishing process to include entirely new special fixture machines and equipment. These machines represent a radically new departure from the generally accepted conception of barrel finishing machines, made possible only by Roto-Finish extensive experimental facilities and long experience with modern, precision surface finishing processes. And these new special fixture machines prove that there are no limits to the size or shape of parts which can be successfully processed with proper equipment, materials and methods.

The new engineering developments which have taken place in the Roto-Finish laboratories open the door wide to entirely new applications and entirely new principles in mechanical surface finishing. Therefore, whatever your finishing problem, we urge you to ship us two finished and several unfinished samples of parts you may wish to have us process in our laboratories. Remember, Roto-Finish guarantees the same result in your shop, as on the samples processed in their laboratories.

Get new FREE CIRCULAR

Roto-Finish COMPANY
3702 MILHAM ROAD, KALAMAZOO, MICH. P. O. Box 988 — Phone 3-5578

▲ For more details circle NED-1054 F4 on enclosed inquiry slip ▲

EC&M TYPE ZHS STARTERS

complete protection for 2300-5000 volt motors

Front and rear view of 4 EC&M 2300 Volt Starters in Sun Oil Company's Sun Station Terminal at Nederland, Texas.

EC&M Type ZHS 2300-5000 Volt Starters have high interrupting capacity (50,000 KVA including the d-c component) for safe and complete protection of the motor and its circuit.

They are available in standard, weather-proof and Type VIII construction for hazardous locations — completely described in Bulletin 1062. Write for copy.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 East 79th Street • Cleveland 4, Ohio

▲ For more details circle NED-1055 F4 on enclosed inquiry slip ▲

Why TAP-LOK* INSERTS have the edge on other threaded bushings

Insert is driven into drilled or cored hole equal in size to tap drill hole for external thread.

SAVES separate tapping operation. Withstands vibration without loosening. Has maximum torque-and-pull resistance. For original equipment, salvage or maintenance applications.

Send for descriptive folder.

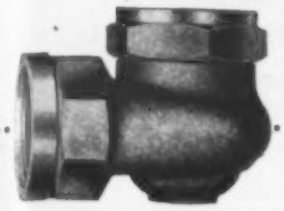
Also manufacturers of Groov-Pins for positive locking press fit.

*Reg. U. S. Pat. Off.

GROOV-PIN CORPORATION
1126 Hendricks Causeway Ridgefield, New Jersey

▲ For more details circle NED-1056 F4 on enclosed inquiry slip ▲

SPRAYING SYSTEMS CO.



for lower cost

and better performance

SPRAY NOZZLES

Modern design. Precision machining. All materials. Thousands of standard industrial spray nozzle types and sizes to choose from. Years of proved experience at your service.

write for this great new catalog today

Ask for our new 48 page Catalog No. 24 . . . the most comprehensive spray nozzle catalog ever produced. Yours for the asking.

SPRAYING SYSTEMS CO.
3211 Randolph Street • Bellwood, Illinois

▲ For more details circle NED-1057 F4 on enclosed inquiry slip ▲

Cut Maintenance Costs with

CARBOLOY MASONRY DRILLS

Anchoring machinery

Stringing electrical conduits

Installing plumbing

Get fast, clean, deep holes, at *any* angle, in concrete, asphalt, tile, brick, slate, marble, etc.

Carboloy Masonry Drills won't pack or stall. Rotary-drill *any* masonry continuously to any depth. Superhard Carboloy cemented carbide cutting tips assure long drill life. Available separately, or in job-designed kits. Sizes 3/16" through 1½".

For complete information contact your distributor or write—

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11179 E. 8 Mile Ave., Detroit 32, Michigan

"Carboloy" is the registered trademark for the products of Carboloy Department of General Electric Company.

▲ For more details circle NED-1058 F4 on enclosed inquiry slip ▲

FREE SAMPLE KIT PROVES BIG TIME SAVINGS!

SEMS-by-SHAKEPROOF

Tedious separate lock washer handling is completely eliminated. Specially designed SHAKEPROOF* Lock Washers are **pre-assembled** to screws —two parts are handled as one! Held on by the rolled thread, the washer can't drop off!

SEND FOR FREE TEST KIT NOW!

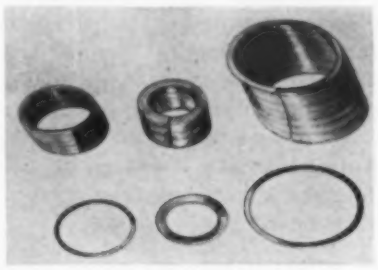
*T. M. REG. U. S. PAT. OFF.

SHAKEPROOF
"Fastening Headquarters"
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois
Offices in principal cities

▲ For more details circle NED-1059 F4 on enclosed inquiry slip ▲

New Processes & Materials

SILVER BRAZING WASHERS in diameters up to 4 in. ID



Produced without dies from standard low temperature alloy brazing wire, these L-M washers are made by winding flat wire on edge, then cutting them partially through. Coil of washers is thus intact. When used, each washer is snapped from coil and preplaced on work as needed. Washers are suitable for use with induction, gas-air, furnace, or any commonly used heating method. They are wound in variety of sizes up to 4 in. ID and are held to close tolerances in thicknesses from 0.101-in. upward. Washers are available in Easy Flo and Silfos as well as copper, bronze and more commonly used alloys. Made by **Lucas-Milhaupt Engineering Co.,** Dept. NED-1, Cudahy, Wis.

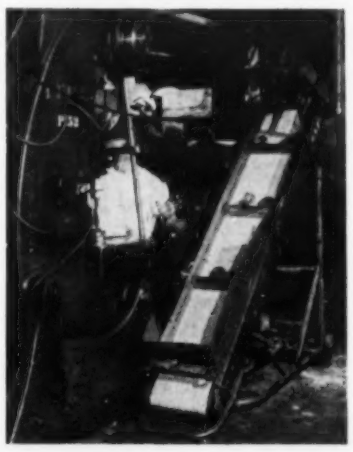
▲ For more details circle NED-1060 F4 on enclosed inquiry slip ▲

SEAM SEALING TAPE also made in bead and bulk forms

High resistance to water, oil, gasoline and aromatic fuels is characteristic of extruded type No. 590.5 seam sealing tape available as thin as 0.020-in., in beads as small as ⅛-in. diameter or in bulk form. It is a green-gray, nonvolatile combination of plasticized Thiokol and asbestos fiber and has excellent adhesion to metals, glass, wood and plastics. Product is unaffected by temperatures up to 175° F and does not become brittle or lose adhesion at −70° F. Applications include sealing glass closures, bulkhead and fuselage openings in pressurized aircraft; riveted seams in aluminum fabrications; and windows and sash in railroad cars. Developed by **Presstite Engineering Co.,** Dept. NED, 3798 Chouteau Ave., St. Louis 10, Mo.

▲ For more details circle NED-1061 F4 on enclosed inquiry slip ▲

INDUSTRIAL CONVEYOR BELTS lightweight Koroseal types offered



Line of lightweight industrial conveyor belts includes Koroseal types and others with "eye-rest" green color for inspection service. High resistance to abrasion, oils, grease and most acids is featured by Koroseal belts which have smooth nonporous surface that resists flaking or checking. Characteristic of Highseal and Kleenseal belts is pleasant green shade which reduces glare and eye strain. Completing line is Economy black belt designed to reduce maintenance problems caused by excessive changes in belt length. Lightweight C.P. conveyor fabric used in line of belts has high resistance to moisture when impregnated with special compounds and long flex life. Made by **B. F. Goodrich Co.,** Dept. E, 500 S. Main St., Akron 18, O.

▲ For more details circle NED-1062 F4 on enclosed inquiry slip ▲

FLUOROTHENE RESINS processed with greater uniformity

Commercial production of Bakelite fluorothene resins in continuous process plant assures greater uniformity of material than was possible with batch-to-batch production method. Fluorothene is specialty type plastic with excellent toughness, heat resistance and volume resistivity at elevated as well as room temperatures. It resists heat up to 390° F and withstands the most corrosive chemicals, such as fuming nitric acid. Low dielectric constant, high dielectric strength and good moisture resistance are valuable in many electrical application. Further uses include tubing, molded components for electronic equipment, protective linings and specialty coatings. Formulated by **Bakelite Co.,** Dept. NE, 300 Madison Ave., New York 17, N. Y.

▲ For more details circle NED-1063 F4 on enclosed inquiry slip ▲

The Dual-Purpose Permanent Magnetic "SWEEPERETTE" *The STICK OF MAGNETISM!*

✔ Use it as a ROLLING SWEEPER for aisles, warehouses, lots, beneath benches, etc!

✔ Use it as a MAGIC WAND for machinery, vats, tool bins, hard-to-get-to places!

10 DAY FREE TRIAL

Here is the self-contained cleaner "Sweeperette", with lifetime magnetic alloy, Alnico V. No wires. No electric current. Your first cost is the last cost. Rolls on wheels like a carpet sweeper along factory aisles, drives, floors, etc. Small metal chips, filings, nails and tacks literally jump to the rotating tube. Disconnect the tube and you have a non-electric magnetic Magic Wand which can be used as an underwater recovery tube, retriever magnet, cleaner, etc. A dozen uses. Neoprene wiper ring cleans the tube quickly, easily, protects the hands. Collection pan, part of unit, speeds the process.

BUY "SWEEPERETTE" DIRECT FROM FACTORY

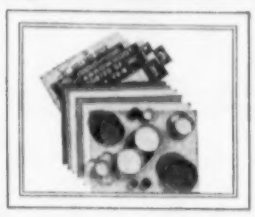
Model	Overall Width	Approx. Shpg. Weight	Price: F.O.B. Erie, Pa.
S-8	10 3/16"	5 lbs.	$34.50
S-12	14 3/16"	6 lbs.	40.50
S-16	18 3/16"	7 lbs.	47.50
S-20	22 3/16"	7½ lbs.	55.00
S-24	26 3/16"	8 lbs.	61.50
S-32	34 3/16"	9½ lbs.	70.00

Write for brochure giving full information. Free 10 day trial. Satisfaction guaranteed or your money back.

ERIEZ MANUFACTURING COMPANY
80F Magnet Drive, Erie, Pa.

▲ For more details circle NED-1064 F4 on enclosed inquiry slip ▲

YOU, too, can save by putting BECK in your picture!



The adaptable BECK Automatic Roll Sheet Cutter makes possible both manufacturing pictures . . . it cuts sensitized photographic paper for the Haloid Company of Rochester, and closures or waxed material for the Irvington Varnish & Insulator Co. of Canada Ltd., of Hamilton, Ont.

And it does both these jobs at a saving . . .

SMOOTHLY . . . QUICKLY . . . ECONOMICALLY

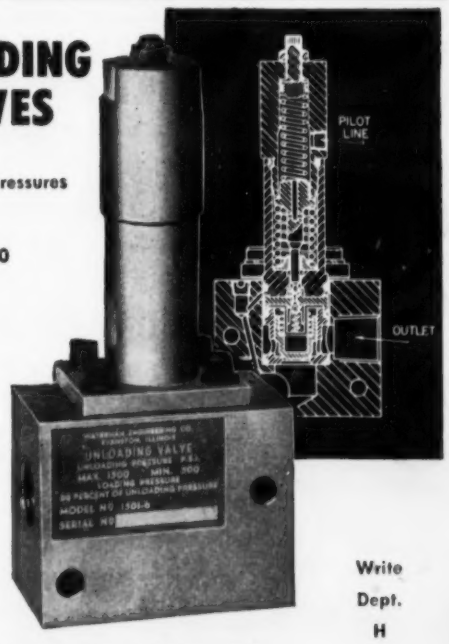
Why not put BECK in your production picture, too?

REMEMBER: If it comes in rolls, the Beck will cut it, count it and stack it!

CHARLES BECK MACHINE CORPORATION
409 N. 13th Street Philadelphia 8, Pa.

▲ For more details circle NED-1065 F4 on enclosed inquiry slip ▲

UNLOADING VALVES



For system pressures to 3000 psi

Flow rates to 30 G.P.M.

Waterman Unloading Valves are fast-acting, long-lived, easily adjustable. Maintain desired pressure settings without continuous readjustment.

Hardened and ground poppets and seats eliminate leakage.

Large internal passages assure maximum flow with a minimum pressure loss.

No external drain lines required.

Write Dept. H for circular

Waterman Engineering Company
725 CUSTER AVENUE • EVANSTON, ILLINOIS

▲ For more details circle NED-1066 F4 on enclosed inquiry slip ▲

No. 40 Ideal

Ace Tube Expander

a leader in the field for more than 50 years!

for general boiler work

Preferred for re-rolling tubes in package and stationary fire tube boilers. Insist on WIEDEKE nationally known Ideal Tube Expanders.

See Your Dealer or Write us for Bulletin No. 40

THE GUSTAV WIEDEKE COMPANY
DAYTON 1, OHIO

For more details circle NED-1067 F4 on enclosed inquiry slip

2 STEPS TO STOP RUST!

To save time and costly labor, and get a better surface for paint: (1) Wire brush or scrape; brush on Tropical Rust Remover and simply wipe off loose rust; remaining rust is neutralized; (2) Seal out rust-breeding moisture with long-lasting, paint-anchoring ACB Primer. Paint jobs last longer. You save in repainting and labor over the years!

FREE! Your business letterhead request brings money-saving facts on effective rust removal; long-lasting paint jobs!

THE TROPICAL PAINT & OIL COMPANY
1124-1272 W. 70th • Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883

For more details circle NED-1068 F4 on enclosed inquiry slip

WHY RISK

use UNBREAKABLE PLAXPAK® Polyethylene BOTTLES

LIGHTWEIGHT
CHEMICALLY INERT
SMOOTH POURING

They will improve plant safety . . . simplify handling of bulk fluids . . . protect purity of liquids put in them. For details, write for "Plaxpak Utility Bottles" brochure or ask to see your nearest Plax distributor.

PLAX CORPORATION
DEPT. D, WEST HARTFORD, CONNECTICUT
IN CANADA: Plax Canada, Ltd., Montreal & Toronto

For more details circle NED-1069 F4 on enclosed inquiry slip

New Literature & Catalogs

Diaphragm Pumps & Chemical Feeders

Lapp Insulator Co., Process Equipment Div.—24-page bulletin 440 is descriptive of line of Pulsafeeder diaphragm-type controlled volume pumps which also function as chemical feeders, meters, filling machines, proportioners and samplers. Both manual and automatically-controlled types are described. Also covered are special liquid handling assemblies and the Auto-Pneumatic Pulsafeeder, adaptable to automatic volume adjustment from commercial pneumatic instruments.

For more details circle NED-1070 F4 on enclosed inquiry slip

Chain Drives

Ramsey Chain Co.—Data on operating characteristics and service factors of chain drives and components are found in 20-page illustrated catalog 154. How to select and order the proper drive and general information on heavy duty units, lubrication, installation and maintenance are included, along with specifications for the entire line.

For more details circle NED-1071 F4 on enclosed inquiry slip

Controlling Dust When Making Paint

American Wheelabrator & Equipment Corp.—Four case histories which relate how dust conditions due to mixing, blending, crushing and grinding in the manufacture of paint are prevented by using local exhaust ventilation are contained in 4-page illustrated bulletin 422. Installations use Dustube cloth tube type dust collectors.

For more details circle NED-1072 F4 on enclosed inquiry slip

Steel Products

Many thousands of sizes, shapes and grades of steel products are listed in well-indexed 226-page Warehouse Stocklist and Reference Guide. The 8½ x 11-in. spiral-bound book classifies structural, plates, sheet and strip, stainless, hot rolled and cold finished bars, forging steels, alloy and tool steels, bolts, rivets, nails and rails, wire and wire rope. Many supplementary technical data are included. Available by request on company letterhead from Jones & Laughlin Steel Corp., 456 Liberty Ave., Pittsburgh 30, Pa.

For more details circle NED-1073 F4 on enclosed inquiry slip

Hydraulic Overload Pitman

Dayton Rogers Mfg. Co.—How bent or broken crankshafts, broken press frames and broken tools and dies can be eliminated by installation of a hydraulic overload pitman is related in 4-page illustrated bulletin F-205. Operational details and specifications for four 47 to 165-ton capacity units are included.

For more details circle NED-1074 F4 on enclosed inquiry slip

Silicone Water Repellents

Dewey & Almy Chemical Co., Construction Specialties Div.—Theory, applications and benefits of silicone resin water repellent compounds for above-grade exterior masonry are covered in 8-page illustrated brochure. Daracone and other repellents are comparatively rated.

For more details circle NED-1075 F4 on enclosed inquiry slip

Polyethylene Resins

Bakelite Co.—Information about molding, extruding and other ways to use Bakelite polyethylene and properties of resins are presented in 8-page folder GA. Photos show principal applications for packaging, wire covering, housewares, pipe and industrial products. Three tables list properties.

For more details circle NED-1076 F4 on enclosed inquiry slip

Special Machinery

Peerless Production Co.—28-page illustrated catalog contains details on 18 representative special machines made by company. Tooling and parts processed by each of these machines is shown. Company specializes in special precision machines for the metalworking industries.

For more details circle NED-1077 F4 on enclosed inquiry slip

Ultrasonic Testing of Materials

Sperry Products, Inc.—Industrial utilization of ultrasonic waves for nondestructive testing of materials and products, as well as application of this technique to existing quality control systems, are described in 8-page bulletin 50-105. The portable Reflectoscope, capable of revealing defects through 30 ft of metal and pinpointing the location, is featured.

For more details circle NED-1078 F4 on enclosed inquiry slip

HINGED PLATEGRIP
BELT FASTENER No. 500
For Heavy Conveyor Belts of changing length

These heavy-duty belt fasteners make a strong, flexible joint in conveyor belts, belts of any width and of from ⅜" to ½" thickness. They offer special advantages in mines, quarries or industrial set-ups where length of position of belt is frequently changed, because sections can be removed or added at will. Joints are opened for this purpose by simply pulling out the hinge pin.

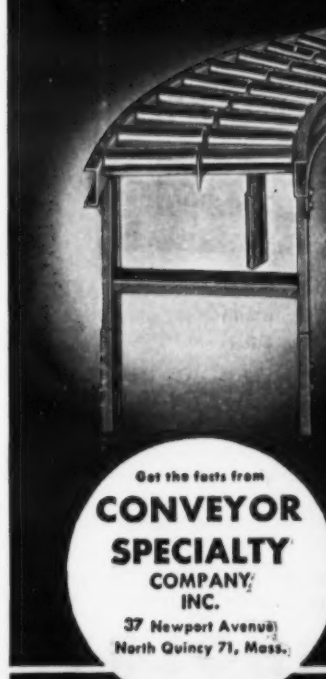
Easily and quickly applied on the job or in the shop. Special design gives deep compression into belting and smooth, flush joint.

Write for Circular

ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY CHICAGO 30

For more details circle NED-1079 F4 on enclosed inquiry slip

Need a Section or a System?



• EIGHT TYPES of gravity conveyors in sizes to meet your requirements.
• Single sections or complete systems planned by skilled engineers.
• Replaceable bearings.

Get the facts from CONVEYOR SPECIALTY COMPANY, INC.
37 Newport Avenue
North Quincy 71, Mass.

UNUSUALLY PROMPT DELIVERY

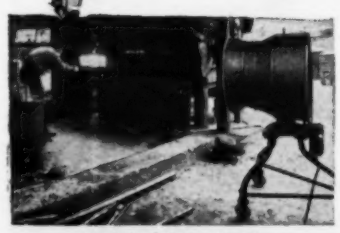
Distributors in Major Cities

• Belt Conveyors • Slat Conveyors • Punch Press Conveyors • Unipac Handlers
• Reciprocating Lifts • "Unitable" Belt Conveyors
• Complete Package Handling Systems

For more details circle NED-1080 F4 on enclosed inquiry slip

For Man-Cooling!

Coppus Airplane Type Heat Killer®
cools large areas — restores efficiency



HEAT KILLER on the job in drop forge plant.

Steel mills, drop forge plants, foundries and other plants with hot working conditions find this Coppus Heat Killer increases worker efficiency . . . at reasonable cost. *A single fan cools large areas.*

Other types also available for cooling furnaces, electrical equipment, for driving out gases, drying out products, drawing out fumes. Write now for detailed information. COPPUS ENGINEERING CORPORATION, 406 PARK AVENUE, WORCESTER 2, MASSACHUSETTS.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

For more details circle NED-1081 F4 on enclosed inquiry slip

HERE'S THE NEWEST

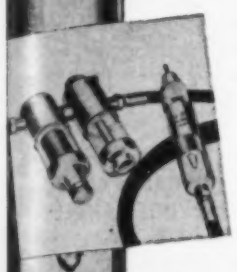
100,000 R.P.M.
NU-JETT
PENCIL GRINDER

Greater Power — New Safety Guard — Automatic Lubrication. Weighs 5 oz.—One Moving Part.

Actual Size of Grinder 7/8" x 5 1/16" 1/8" Chuck

NU-JETT DOES ANY FINE PRECISION GRINDING, POLISHING, FINISHING. Use it for Etching, Deburring, Die Work, Carving on Wood, Metal, Rubber and Plastic.

Air driven on 50 lbs. pressure or more, very smooth in operation, compact, it truly handles like a pencil.



New Low Cost Package $42.50

Here is an outstanding value that includes NU-JETT GRINDER, our new Air Filter, Automatic Lubricator, Hose and Chuck Wrench.

NU-JETT PRODUCTS
1355 Michigan N. E.
PHONE 9-8831 GRAND RAPIDS, MICH.

For more details circle NED-1082 F4 on enclosed inquiry slip

Reduce Inventory

Why stock a big assortment of ready-made hose lines when a small supply of Aeroquip bulk hose and detachable, reusable fittings answers the purpose. With Aeroquip you make hose line replacements as they are needed. You save time, cut costs, reduce inventory!

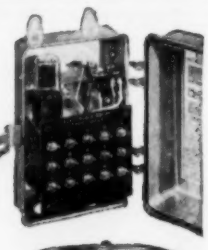
Aeroquip
REG. TRADE MARK

AEROQUIP CORPORATION, JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle NED-1083 F4 on enclosed inquiry slip

NEW!
ELECTRONIC LEVEL CONTROL



- extreme sensitivity
- permanently accurate
- maintenance-free

The new Photoswitch Electronic Liquid Level Control reaches a new high in level control performance. Highest sensitivity . . . controls *all* electrically conductive liquids. Accuracy is independent of pressure or temperature. Responds to only 1 microamp of current in liquids with resistivity up to 20 megohms per cc. Has no floats, or stuffing boxes to fail in service. Universal pump-up, pump-down — high- or low-level safeguard . . . fail-safe operation for all functions. Highly safe, even in explosive media . . . only 11.5 v, 6 milliamps maximum on exposed contacts. Sanitary, corrosion-resistant stainless steel probes. Universal power feature . . . operates from 115 or 230 volt, 50/60 cycle AC supply.

Write today for Bulletin PF544

Photoswitch Incorporated
Dept. P8-6 Broadway, Cambridge 42, Mass.
Offices in all principal cities.

For more details circle NED-1084 F4 on enclosed inquiry slip

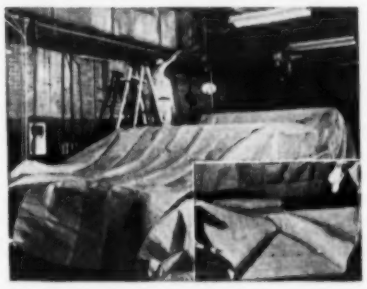
New Processes & Materials

MARKING DECAL
withstands temperatures up to 400° F

Marking decal is designed for use on metal products which are subjected to high temperatures in use and will withstand up to 400° F without deterioration. Designated Bak-Cal, it can be used either for applying necessary information such as use instructions and manufacturers identification or for decoration. At the higher temperatures, it bakes itself into the metal or finish, and becomes durable, washable and abrasion resistant. It can be produced in any number of colors and in any shape or size. Decal can be applied at production line speeds to finished or unfinished metals, adhering instantly and permitting immediate packaging of the product. Made by **American Decalcomania Co.**, Dept. ND, 4344 Fifth Ave., Chicago 24, Ill.

For more details circle NED-1085 F4 on enclosed inquiry slip

KRAFT PAPER DROP CLOTHS
flameproofed, protect equipment



Long machinery lines or special equipment can be easily covered for nightly protection with Fibro Flameproofed Krinkle Kraft dropcloths available in 100-ft lengths and widths of 9, 12 and 15 ft. Product's light weight and unique packaging make it easy to handle. Sheets can be cut with scissors if necessary. Paper will not flare up or support flame and is plasticized for flexibility in handling and draping. It will not scratch furniture or machinery. Special treatment also makes dropcloths skid-resistant, providing safe walking surface. Weatherproof protection afforded compares to that of heavier tarpaulins. Sheet sizes also available are 12 x 12, 12 x 15, 15 x 20 and 15 x 24 ft. Made by **Fibleco Illinois Corp.**, Dept. NE, 4646 N. Clifton St., Chicago 40, Ill.

For more details circle NED-1086 F4 on enclosed inquiry slip

PLASTIC CLEANER
will not scratch polished surfaces

Highly polished, transparent plastic surfaces such as aircraft windshields and domes can be cleaned without fear of scratching or crazing with Permatex plastic cleaner. Product meets nonscratch and antistatic aircraft specifications and will also effectively remove squashed bugs, weather stains, grease, oil, dirt and haze from Plexiglas, Lucite and other plastic and glass surfaces. It is applied in single "rub on—wipe off" application and leaves no powder around edges of surface. Developed by **Permatex Co.**, Aviation Div., 1702-1720 Ave. Y, Brooklyn 35, N. Y.

For more details circle NED-1087 F4 on enclosed inquiry slip

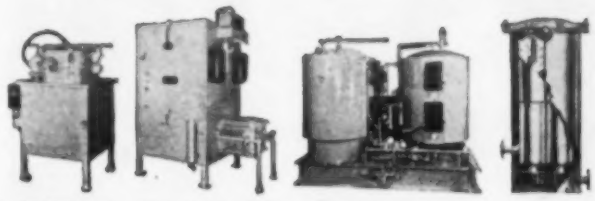
RUBBER & PLASTIC MOLDINGS
extruded of variety of materials

Convoluted open-web and multi-web balloon type extrusions are among the complex appliance moldings that can be produced by an improved extrusion technique and vulcanizing method. Intended for use as water, pressure and temperature seals, the moldings can be extruded of natural rubber, GRS, Hycar, Neoprene or vinyl in a range of colors. They are available in strip or continuous form and can be made to accommodate any radius by an edge-notching process that does not interfere with sealing qualities. Continuous forms for rectangular or circular doors are produced with 90-degree corner splices employing a vulcanizing technique. Made by **Geauga Industries, Inc.**, Middlefield 2, O.

For more details circle NED-1088 F4 on enclosed inquiry slip

HILCO LUBRICATING AND INDUSTRIAL OIL MAINTENANCE EQUIPMENT

Saves You MONEY, OIL and MACHINERY



OIL RECLAIMER — PURIFIER, RE-REFINER — HIGH CAPACITY RECLAIMER — FILTER

A COMPLETE LINE OF EQUIPMENT FOR RECLAIMING, FILTERING, PURIFYING AND RE-REFINING OIL.

★ Hilco units are available for continuous or batch operation. You can keep your lubricating and industrial oils clean and recover large quantities of oil at low cost.

Whenever Oil is used it becomes contaminated—must be discarded or conditioned for further use.

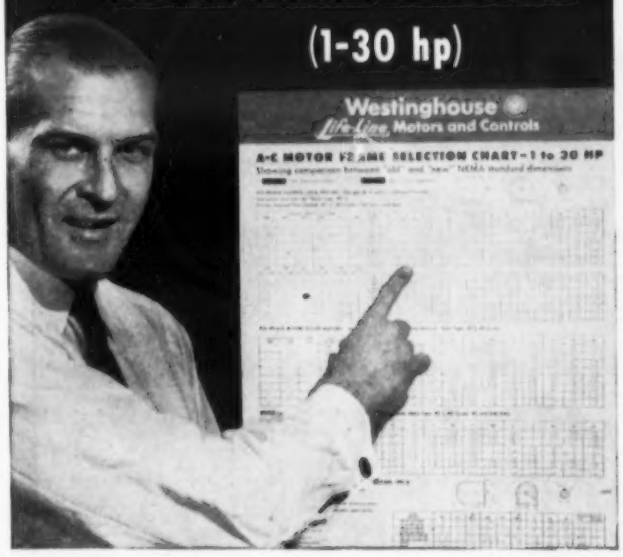
There is a HILCO to do This Job for You
Cleans Oil, Reduces Down Time, Increases Production!

★ Tell Us About Equipment You Are Operating and We Will Forward FREE Literature and Recommendations.

OIL PURIFIER DIVISION
THE HILLIARD CORPORATION
40 W. 4th ST. • ELMIRA, N. Y.
IN CANADA — Upton - Bradeen - James, Ltd.
890 Yonge St., Toronto, 3464 Park Ave., Montreal

For more details circle NED-1089 F4 on enclosed inquiry slip

Free NEW GUIDE TO A-C MOTOR FRAME SELECTION (1-30 hp)



This WALL CHART saves time in comparing old and new NEMA frame dimensions for . . .

- general-purpose a-c motors
- wound-rotor motors
- single-phase motors
- a-c flange-mounted motors

Here's a quick and ready reference to the new NEMA frame number for each type of a-c motor application (1-30 hp). Start with the rpm and horsepower requirements for a motor, then simply follow across this wall chart to locate the correct, new NEMA frame number and all its basic frame dimensions.

In addition, directly above this information are given the standard dimensions for the corresponding old NEMA frame number. Thus, you have a complete selection guide and comparison table in convenient, durable, chart form ready for wall hanging.

J-21783

YOU CAN BE SURE . . . IF IT'S Westinghouse

Westinghouse Electric Corporation
3 Gateway Center, P. O. Box 868
Pittsburgh 30, Pennsylvania

Please send me copies of the Westinghouse A-C Motor Frame Selection Wall Chart—DC 463

Name_____
Firm_____
Address_____
City_____ State_____

For more details circle NED-1090 F4 on enclosed inquiry slip

▲ For more details circle NED-1091 F4 on enclosed inquiry slip ▲

MODERN TIME AND COST SAVERS BUILT BY... Standard GRAVITY & POWER CONVEYORS

SAVE TIME LOADING — UNLOADING WITH THE

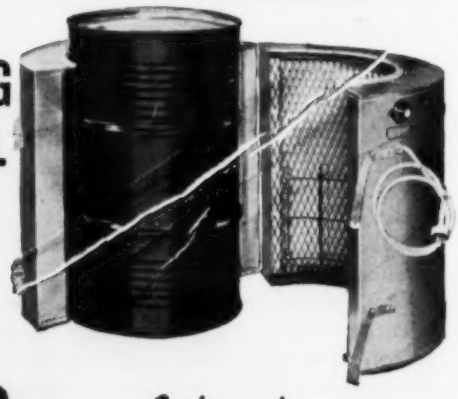
E-X-T-E-N-D-O-V-E-Y-O-R

This compact, mobile, easily maneuverable power-belt conveyor unit extends to 46 ft. in either direction and retracts to 9 ft. 10 in. Reaches into cars, trucks, trailers. Handles boxes, bags, bundles, cartons, crates, cases weighing up to 150 lbs. Available in two models—1 way stretch and 2 way stretch—and 4 sizes. Write for Extendoveyor Bulletin—address Dept. NED-64.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

▲ For more details circle NED-1092 F4 on enclosed inquiry slip ▲

WARMS ANYTHING IN METAL DRUMS UP TO 450°F



Palmer *Automatic* DRUM WARMER

A portable electric oven in two models for 55 or for 30 gallon steel drums.
Saves Time—Saves Money. Makes removal from drum by dipping, pouring or pumping, easy and convenient, for any viscous material that handles better when warm.
Operates automatically and economically. Two hinged halves, well insulated, fit around drum at point of use—eliminates handling hot drums.
Supplied for 208, 230 or 460 volts, single, or three phase. Catalogue, prices and specifications on request. Write today!

HAROLD L. Palmer COMPANY
2980 West Davison Ave.
Detroit 6, Michigan

▲ For more details circle NED-1093 F4 on enclosed inquiry slip ▲

New Processes & Materials

Conveyors for All Purposes

Samuel Olson Mfg. Co.—Specifications and engineering data on various models of roller and wheel conveyors and accessories; spiral chutes and conveyors; and belt, slat and vertical reciprocating conveyors are found in extensive 32-page catalog 1000B. Many photos show applications. Also covered are suspended tray conveyors, subveyors, pallet dollies and roll stands.

▲ For more details circle NED-1094 F4 on enclosed inquiry slip ▲

Chemistry of Melamine Plastic

American Cyanamid Co.—56-page booklet "The Chemistry of Melamine" has sections devoted to applications, specifications, physical properties, chemistry and structure, toxicity and test methods. A bibliography is also included.

▲ For more details circle NED-1095 F4 on enclosed inquiry slip ▲

Cast Bronze & Copper Products

American Brake Shoe Co., National Bearing Div.—Alloy chart contained in illustrated booklet J-4515 of 24 pages lists composition, analyses, properties and applicable specifications of National's copper, babbitt, bronze and aluminum alloys for industry. Performance characteristics and specific product uses are listed in a casting guide section. Firm's research, process, engineering and production facilities are described.

▲ For more details circle NED-1096 F4 on enclosed inquiry slip ▲

Stainless Steel in Chemical Processing

Allegheny Ludlum Steel Corp.—Revised 34-page illustrated booklet "Allegheny Metal in Chemical Processing" covers use of stainless steel in equipment for the manufacture of acids and other chemicals in various industries. Corrosion resistance data, fabrication information and a stainless steel finder are included.

▲ For more details circle NED-1097 F4 on enclosed inquiry slip ▲

Machinability Comparison

Titan Metal Mfg. Co.—48-page illustrated booklet comprises a report on the comparative machining characteristics of leaded steel and free-cutting brass. Both closely controlled laboratory and production run comparisons are shown. Factors of machinability, tool down-time and replacement, product quality and production rates are all considered.

▲ For more details circle NED-1098 F4 on enclosed inquiry slip ▲

Bench Milling Machine

Elgin Tool Works, Inc.—Bench type model HM-50-1 precision milling machine is described and illustrated in 4-page catalog. Infinitely variable spindle speeds from 85-2650 rpm are provided, and optional power feed is available. Standard and optional accessories are listed. Complete specifications are given.

▲ For more details circle NED-1099 F4 on enclosed inquiry slip ▲

Chemical & Process Equipment

Colonial Iron Works Co.—8-page illustrated catalog shows line of standard and custom chemical and process equipment and steel and alloy plate vessels. Heat transfer, distillation, agitation and evaporation products are among those described. Operation and design are detailed.

▲ For more details circle NED-1100 F4 on enclosed inquiry slip ▲

Metal Pole Light Mountings

Thompson Electric Co.—"Thompson Servisafe Units for Pole and Wall-Mounted Luminaires" is title of illustrated 32-page bulletin PB-53. Standard models of this equipment with accessories are covered by data showing design, construction and other features. Standard pendant and floodlight luminaires can be used for lighting industrial, parking, shipping and storage areas. Service and maintenance of units is facilitated by feature which permits them to be lowered to ground level when required.

▲ For more details circle NED-1101 F4 on enclosed inquiry slip ▲

Adjustable Dock Ramp

Rowe Methods, Inc.—Illustrated bulletin describes model 20 N.F. nonfloating hydraulic adjustable ramp of 20,000 lb capacity. Unit is designed to make fast bridge connections between truck and loading dock and is raised and lowered by pushbutton controls. When not in use it can be positioned flush with dock.

▲ For more details circle NED-1102 F4 on enclosed inquiry slip ▲

Your BEST Buy ...regardless of price!

WITT CANS and PAILS

WITT CANS and PAILS are designed and constructed to give you more service for your dollar. They withstand years of hard usage and abuse which wreck the ordinary container. Many WITT CANS and PAILS are still in excellent condition after 10, 15, yes even 20 years or more service. They're guaranteed to outlast 3 to 5 of the ordinary kind. Regardless of price, you get more for your dollar. Buy a WITT!

Compare WITT CAN and PAIL features with others on these points . . .

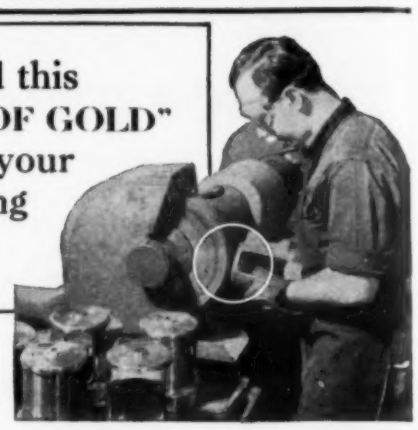
- STRAIGHT SIDES
- HEAVY GAUGE STEEL
- STRUCTURAL STEEL BANDS
- HOT DIP GALVANIZING
- PINCH-PROOF HANDLES
- STURDY LID
- DEEP ROLLING CORRUGATIONS

Witt Cans "Originators of the Corrugated Can" WITT CANS HAVE THE "RIGHT" ANGLE

THE WITT CORNICE COMPANY, 2124 WINCHELL AVENUE, CINCINNATI 14, OHIO

▲ For more details circle NED-1103 F4 on enclosed inquiry slip ▲

Add this "TOUCH OF GOLD" to all your polishing jobs



When you standardize on Norton ALUNDUM* abrasive, every polishing job you do gets off to a better start — and finish!

Its thoroughly uniform grains give you thoroughly uniform polishing. No oversized grains to mar surfaces — no undersized grains to loaf on the job. Also, ALUNDUM is specially treated to raise its capillarity. Each grain soaks up cement or glue uniformly and adequately and is held firmly — assuring long-lasting, top-performing wheels.

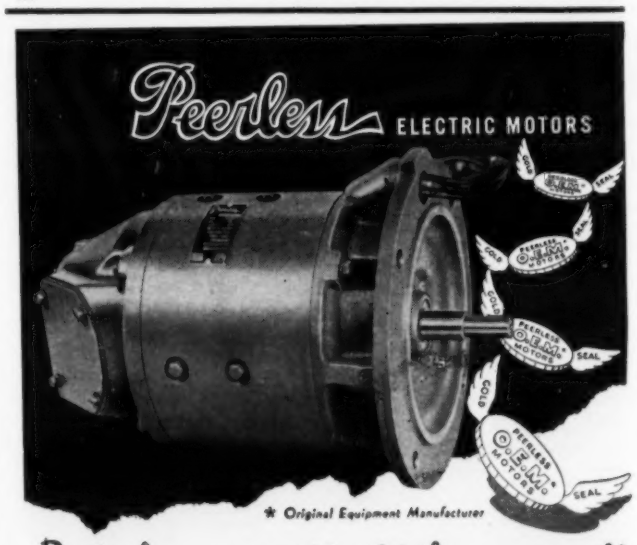
These advantages mean the product-improving, time-saving "Touch of Gold" in all your polishing, from roughing to finishing, manual or automatic. See your Norton Distributor for complete facts, or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass. G-272

NORTON ABRASIVES
Making better products . . . to make other products better

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

▲ For more details circle NED-1104 F4 on enclosed inquiry slip ▲

Peerless ELECTRIC MOTORS



Built the way you'd build them yourself

If you had the facilities, you'd build your own motors, and you'd build them exactly the way you want them.
Well, that's exactly the way Peerless builds motors . . .
With your design engineers, we start with the product and its functions . . . analyzing your needs as your engineers see them . . . adding our own knowledge of motor designs and applications. Together, we boil everything down to the one motor that will serve you best. Then, we match our production schedule to yours.
You'll want more information about having Peerless work on your motor problems. It's easy to get. Just pick up the phone and call—ask for me if you wish. You can have the motors you want—Peerless Gold Seal Motors—built the way you'd build them yourself.

Ralph Kimble
President

THE PEERLESS ELECTRIC CO. • WEST MARKET ST., WARREN, OHIO
MOTORS FANS BLOWERS

▲ For more details circle NED-1105 F4 on enclosed inquiry slip ▲

FOLD • SEAL • MAIL

Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of the desired items. Your request will be forwarded promptly to the manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957	1007	1057	1107	1157
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962	1012	1062	1112	1162
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169

FOLD TO THIS LINE

20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122	1172
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190
41	91	141	191	241	291	341	391	441	491	541	591	641	691	741	791	841	891	941	991	1041	1091	1141	1191
42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194

FOLD ON THIS LINE

45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

—USE THIS SLIP FOR JUNE 1954 ISSUE ONLY—

F-4

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

FIRST CLASS
PERMIT NO. 36
Sec. 34.9 P. L. & R.
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

4c POSTAGE WILL BE PAID BY—

NEW EQUIPMENT DIGEST
Penton Building
CLEVELAND 13, OHIO

Only those having an engineering, specifying or buying title and connected with a company listed in Dun & Bradstreet as a manufacturer or processer are qualified to receive NEW EQUIPMENT DIGEST on our regular mailing list. The only exceptions to this rule are key men of railroad, steamship and other transportation firms. NEW EQUIPMENT DIGEST is not sent to salesmen, representatives or other distributors.

Only inquiries from individuals who qualify under the above classifications will be serviced if sent to us.

IMPORTANT

Because we must check the distribution of NEW EQUIPMENT DIGEST at least once each year, please fill-in completely the coupon below. If you returned one of our regular mail questionnaires or an inquiry within the past year, you may omit this. The information you give will be held confidential and used only for verifying or correcting our circulation mailing list.

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

Please send NEW EQUIPMENT DIGEST to me each month free of charge.

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME ..... TITLE .....

NAME ..... TITLE .....

NO MORE CARBON SCRAPING

Dunk and Drier Basket Included

U.S. Pat. No. 2,318,842*
New 6½ gal. size deep "Vapor-catcher" design pail

The More Potent* GUNK HYDRO-SEAL

A WORD OF CAUTION
If it doesn't bear the Genuine GUNK trademark, it may be a partly diluted imitation—and will not give you the Safety and Advantages of Genuine GUNK and should be flatly refused.

*1. Faster . . . Terrific penetration . . . New improved odor.
*2. Quickly digests and removes carbon gum, paint, lead; makes possible accurate visual inspection and fitting of delicate metering mechanisms, jets, orifices, and diesel nozzles . . . without etching.
3. Lasts more than one year . . . due to water blanket.
4. Works cold . . . Rinses wet or dry.
5. Patented Double Barrel Performance Guaranteed.

SOLD BY BETTER JOBBERS EVERYWHERE
Write for Name of Nearest Stocking Jobber
—Flatly Refuse Substitute Imitation—

IMMEDIATE DELIVERY 1 PINT OR A TANK CAR
CURRAN CORP. Mfg. Chemists LAWRENCE, MASS.

120 South Canal St.

For more details circle NED-1106 F4 on enclosed inquiry slip

NOW—A LABELING AND PROTECTIVE TAPE THAT STICKS TO *OIL*Y METAL!

LABELON Pressure-Sensitive OIL-STIK TAPE

STICKS TIGHTLY, YET STRIPS OFF CLEANLY
AVAILABLE PLAIN OR PRE-PRINTED
WIDE RANGE OF COLORS
WIDTHS FROM ½" TO 22"
CAN BE WRITTEN OR PRINTED ON AT POINT OF USE

Oily Metal Motor Case Stampings Identified by OIL-STIK Label

OIL-STIK Tape Protects Bearing Surface Still Wet with Cutting Oil

Nothing else like it—and already acclaimed by leading metal working companies! Engineers, supervisors, inspectors, stockroom and shipping clerks use OIL-STIK to *identify* fabricated metal parts, tools, dies, jigs, machinery . . . to *protect* precision-finished surfaces. If you have an *oily surface* labeling problem, investigate the sensational new Labelon OIL-STIK Tape today!

For samples and prices, see your dealer—or write Dept. NED-6

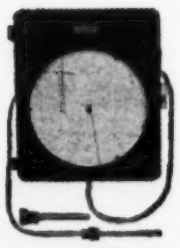
LABELON TAPE CO., Inc. 450 Atlantic Ave. Rochester 9, N. Y.

For more details circle NED-1107 F4 on enclosed inquiry slip

PALMER TEMPERATURE INDICATING INSTRUMENTS

MERCURY ACTUATED

4½" DIAL THERMOMETERS
Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted, 11 inches of scale reading. Interchangeable with standard industrial separable sockets. Stem can be placed at any angle and case can be rotated to any readable position.



RECORDING THERMOMETERS
Twelve inch die-cast aluminum case with black or white wrinkle or satin finish. Single or multiple pen construction. Electric or spring wound clock, 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges—40+950°F. or Equivalent in °C.

INDUSTRIAL THERMOMETERS
Red-Reading Mercury—Extruded brass case—chrome finish. Ranges —40+950°F or Equivalent in °C.

RED-READING MERCURY LABORATORY THERMOMETERS
Thoroughly annealed for permanent accuracy. Complete line A. S. T. M. and fractional division types.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

For more details circle NED-1108 F4 on enclosed inquiry slip

New Processes & Materials

ACETATE FILM TAPE
used for mending, reinforcing, etc.

Transparency, thinness and strength are claimed for P 90 clear acetate film tape. Also resistant to water, it can be used as a protective-covering, as laminant over printed materials for protection against aging, moisture and exposure, and as a laminate over printed acetate fiber tapes. Tape is suited for mending, reinforcing or attaching riders to documents or printed matter where thinness is a factor. Made by **Permacel Tape Corp.**, Dept. R, New Brunswick, N. J.

For more details circle NED-1109 F4 on enclosed inquiry slip

LOW MELTING OVERLAY
for frictional wear resistance

Ferrous and nonferrous surfaces subject to frictional wear which require a copper base alloy are suitable for application of EutecRod 186, a low melting point overlay. It can be used for building up or overlaying steel, cast iron, copper, and copper and nickel alloys. Heat of application is 1400-1600° F. Material is available flux coated or bare; has a low coefficient of friction, good ductility and corrosion resistance; and is fully machinable. Hardness as deposited is about 200 Brinell hardness number; this can be increased to over 300 bhn with peening and cold working. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

For more details circle NED-1110 F4 on enclosed inquiry slip

WATER PURIFIER
produces triple distilled water

Tap water can be rapidly changed into the chemical equivalent of triple distilled water (in terms of specific resistance) for as little as 10 cents per gallon by this device known as Quikpure. It is comprised of a 16-oz polyethylene squeeze bottle, bottom of which contains a mixture of cation and anion exchange resins. Tap water poured into the bottle is converted to distilled water in about 1 minute. Cap permits water to be discharged, but retains the resins which can be used repeatedly up to about 25 gallons, depending upon its hardness. When they cease to react, a color change occurs. Capacity is about 12 oz. Distributed by **Central Scientific Co.**, 1702 W. Irving Park Rd., Chicago 13, Ill.

For more details circle NED-1111 F4 on enclosed inquiry slip

MORE POWER PER POUND THAN ANY OTHER ENGINE

The most powerful (25½ h.p.), economical, gasoline powered 4 cylinder engine ever put together in such a small package. The pet of the Armed Services. Tens of thousands now in use all over the world.

Write for Free Booklet and Specifications DEPT. NE 6
AEROJET-GENERAL CORPORATION
2530 Spring Grove Avenue • Cincinnati 14, Ohio

For more details circle NED-1112 F4 on enclosed inquiry slip

Hotpack ELECTRIC HEAT TREATING FURNACES

SPECIFY Hotpack

HIGH TEMP. BATHS for Tempering Metal Cleaning
•
ELECTRIC FURNACES
•
OVENS 12 to 250 cu. ft.
•
TEST ROOMS
•
STERILIZERS
•
STILLS

For hardening, drawing, tempering, and annealing or normalizing of dies, punches, gages, fixtures or other parts are performed readily with these redesigned Hotpack Electric Box Furnaces.

No. 7074

This new Hotpack Electric Furnace is fast heating—built for continuous use from 300° F. to 2000° F. It is the only furnace equipped with Automatic Controlling-Indicating Pyrometer and also with Limitstat Control in this price field.

SPECIFICATIONS

Model	Interior Size W. D. H.	Current Characteristics	Prices F.O.B. Phila.
7076	8"x8"x5½"	110 V AC 15 Amp	$230.00
7074	8"x8"x11"	115 V AC 15 Amp	$255.00
7075	12"x12"x11"	220 V AC 23 Amp	$370.00
7077	15"x15"x16½"	200 V AC 30 Amp	$575.00
7079	12"x12"x5½"	110 V AC 15 Amp	$265.00

THE ELECTRIC Hotpack COMPANY, Inc.
5063 COTTMAN STREET, PHILADELPHIA 35, PA.

For more details circle NED-1113 F4 on enclosed inquiry slip

DON'T BEAT IT . . . SHAKE IT!

with SPO air vibrators

Bins, hoppers, chutes equipped with SPO will always flow! There is no clogging or packing of powdered or granular materials.

While low in cost, SPO air vibrators are built for continuous hard use and incorporate a special corrosionproof cylinder liner. Types and sizes are available to meet every vibration need.

SERIES 81

1902-81

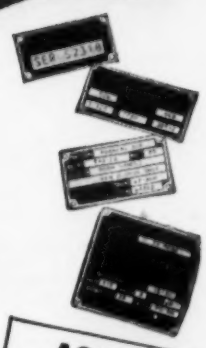
Write for Bulletin 50 for complete details.

SPO INCORPORATED
6475 GRAND DIVISION AVENUE • CLEVELAND 25, OHIO

For more details circle NED-1114 F4 on enclosed inquiry slip

How To Mark Name Plates In 1/5 the Time

Cutting costs in these times is a good trick if you can do it. You can, on plates requiring detail marking, by using an Automark Electric Metal-Marking Typewriter. The operator lightly touches the key and the Automark does the rest, quickly and automatically. No dial to turn—no lever to pull. Marking output is increased five times and worker fatigue is greatly reduced. Write today for Bulletin 8-16.



AUTOMARK
Electric Metal-Marking
TYPEWRITER
Manufactured Exclusively By

AGENTS
Desirable territories open for responsible representatives. Write giving complete information, lines carried and territory covered.

DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

For more details circle NED-1115 F4 on enclosed inquiry slip

Giant Lindberg furnace uses 15 Star-Kimble Brakemotors

LINDBERG ENGINEERING USES

Star-Kimble Brakemotors because . . .

1. *Installation costs are lower.* Motor and brake a single unit — no alignment problems.
2. *Maintenance costs are lower.* Brake wear very low.
3. *Work positioning remains accurate.* Brakemotor stops maintain their precision.

Lindberg uses Star-Kimble Brakemotors *exclusively* wherever brakes are needed in furnace operation. For information, write for Bulletin B-501-A.

Standard and special motors of all types, 1 to 125 hp; generators and motor-generator sets, 1 to 100 kw.; Marine motors, ½ to 125 hp.

Star-Kimble
MOTOR DIVISION
Miehle Printing Press & Mfg. Co.
214 Bloomfield Avenue, Bloomfield, New Jersey

▲ For more details circle NED-1118 F4 on enclosed inquiry slip ▲

FREE LUBRICATION SURVEY OF YOUR PLANT

Eliminate bearing failures like this
(due to haphazard lubrication)

An experienced Farval engineer will come into your plant and conduct a Free Lubrication Survey of your equipment. This Farval Survey will tell you:

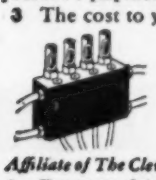
1 The most economical method of lubrication for each piece of your equipment.

2 Whether centralized lubrication can be installed on your present equipment.

3 The cost to you of a Farval centralized system of lubrication on any or all pieces of machinery.

4 How centralized lubrication can increase bearing life, save you maintenance costs and increase production.

These are facts that can save you thousands of dollars! A Farval engineer is ready to serve you promptly. This is a Free Survey—no obligation. Write today!



THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio

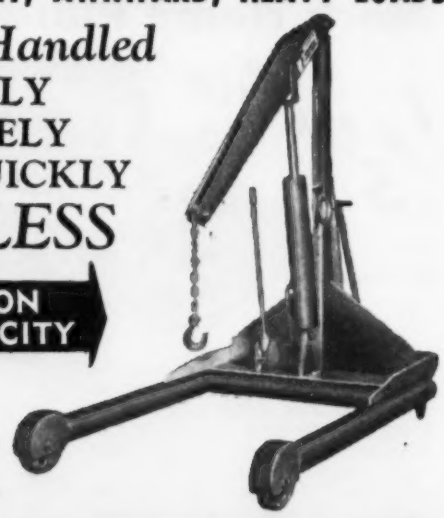
Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

▲ For more details circle NED-1119 F4 on enclosed inquiry slip ▲

BULKY, AWKWARD, HEAVY LOADS

Handled
· EASILY
· SAFELY
· QUICKLY
for LESS

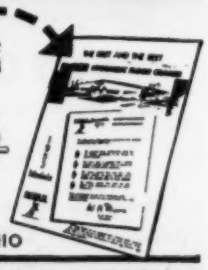
2 TON CAPACITY



SUBSTITUTE FOR AN ELEPHANT ®

GET THIS BOOK

Gives all the facts about Ruger's complete line of hydraulic floor and truck mounted cranes, capacities 1000 to 6000 lbs.



RUGER CRANES

619 West Fourth St. UHRICHSVILLE, OHIO

▲ For more details circle NED-1120 F4 on enclosed inquiry slip ▲

New Literature & Catalogs

O-Rings

Goshen Rubber Co.—In addition to providing a complete listing of the various sizes, compounds and groove dimensions available in line of O-rings, 12-page illustrated brochure presents useful information on designing for O-ring seals. Typical applications are shown, and use of the O-ring as a static, reciprocating or rotary seal is discussed.

▲ For more details circle NED-1121 F4 on enclosed inquiry slip ▲

Vises & Clamps

Wilton Tool Mfg. Co.—More than 150 illustrations are used in general catalog No. 110 on different types of clamps, vises and positioning devices. Both power and manually-operated types are included. Cross-section drawings help point up features of the equipment. Complete specifications are given.

▲ For more details circle NED-1122 F4 on enclosed inquiry slip ▲

Rectifier Handbook

Sarkes Tarzian, Inc., Rectifier Div.—72-page illustrated "Selenium Rectifier Handbook" 666 is complete guide to selection and application of these important electrical components. Different types are treated in detail in separate sections. Performance and engineering data, as well as replacement guide, round out this rectifier reference volume. Though priced at $1, it is available free to qualified engineering and production executives.

▲ For more details circle NED-1123 F4 on enclosed inquiry slip ▲

Stapling Machines

International Staple & Machine Co.—8-page illustrated catalog covers Staple Knight air operated carton stapling machines. Two models feature retractable anvil stapling head which allows fast concealed clinches to be made. Ease of loading and operation are two features which are pointed up. Data are also given on a small Boxer hand-operated unit.

▲ For more details circle NED-1124 F4 on enclosed inquiry slip ▲

Miniature Roller Clutches

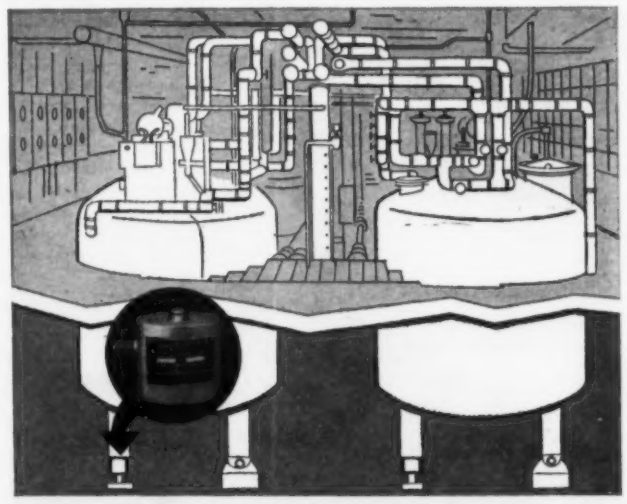
Miniclutch Co.—Line of miniature one-way roller clutches which permit drive in one direction and free-wheeling action in the opposite direction is subject of 4-page illustrated catalog B-54. Design and installation data and dimensions are given roller assemblies and complete clutches. Typical applications of one, two and three-clutch assemblies are shown.

▲ For more details circle NED-1125 F4 on enclosed inquiry slip ▲

Rubber Hose & Belting

Carlyle Rubber Co.—24-page illustrated catalog covers industrial rubber hose and belting products. Hose types vary from acetylene hose to welding hose, consisting of 27 different types in all, each being individually discussed. Other items include conveyor belting, rubber boots and dredging sleeves.

▲ For more details circle NED-1126 F4 on enclosed inquiry slip ▲



Baldwin SR-4® load cells permit remote and automatic control of latex "batching"

To weigh liquid latex directly in the processing tanks, this leading rubber company sought a method which would require very little head room, use a minimum of steel and control various steps of each batch with ½ of 1% accuracy.

This problem was solved by installing a Baldwin SR-4 weighing system. The SR-4 cells' small size, rugged construction and absence of moving parts made it possible to meet each requirement set by the customer. The electrical nature of the SR-4 cells also made possible remote location of the indicating-controlling instrument.

Write for our two new booklets on tank weighing (No. 4106) and crane scales (No. 4105). Address: Dept. 3129 Baldwin-Lima-Hamilton Corporation, Philadelphia 42, Pa.

BALDWIN-LIMA-HAMILTON
Philadelphia 42, Pa. • Offices in Principal Cities
In Canada: Peacock Bros., Ltd., Montreal, Quebec

▲ For more details circle NED-1127 F4 on enclosed inquiry slip ▲

get the best out of your tool steel through

PROPER DRESSING

NAZEL FORGING HAMMER

Here is a "Package" that will get rid of a costly and annoying problem . . . In fact, it will save up to 60% of costs for cutting and chipping tools . . . the best life is gotten out of today's steels through proper dressing . . . proper steel, properly treated, will reduce costs substantially. Now, at your own convenience, you can dress as many tools as are needed, and keep close control of your tool inventory.

The complete "Tool Dressing Package", entirely engineered by LOBDELL UNITED CO., (subsidiary of United Engineering and Foundry Co.) . . . includes all of the Forging, Heat Treating and Dressing Equipment . . . plus, the practical methods needed . . . and this "Package" not only reduces inventory costs, but it can do this at low *initial cost*, recoverable nominally in one year . . . without special metallurgical control.

The "versatile" NAZEL Electro-Pneumatic Forging Hammer is the LOBDELL UNITED CO. product . . . For the additional equipment presented within this "Package", LOBDELL is joined by a group of the most reputable leaders in their fields:

Heating Equipment by Eclipse Fuel Engineering Company
Tool Grinding Equipment by Black and Decker Company
Accessory Tools and Tool Steels by Bedford Tool and Forge Company

Write for "Tool Dressing Package" **LOBDELL UNITED COMPANY**
1836-1954 WILMINGTON 99, DELAWARE
A SUBSIDIARY OF UNITED ENGINEERING AND FOUNDRY COMPANY

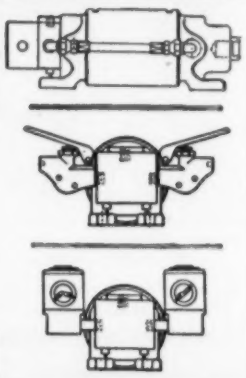
▲ For more details circle NED-1128 F4 on enclosed inquiry slip ▲

for designers . . .

NOW A COMPLETE AIR POWER PACKAGE

THE NEW **POWER-PACK** AIR CYLINDER with BUILT-IN VALVE

CARTER



The ultra-modern power package that gives you your choice of solenoid, poppet, or remote control. Designs into automatic setups easily. Offered in all standard bore sizes and mounting styles . . . stroke lengths to 3 feet. Precision type built-in valve assures accurate control of power. Carter Controls, Inc., 2876 Bernice Road, Lansing, Ill. Phone Lansing 1305.

Delivery One Week on Most Models

SEND FOR COMPLETE INFORMATION ON DETAILS AND SPECIFICATIONS

▲ For more details circle NED-1129 F4 on enclosed inquiry slip ▲

BLUE CHIP WINNINGS WITH Brightboy RUBBER-CUSHIONED ABRASIVES

MAKE HIGHER PROFITS from time savings of as much as 50% in your finishing! MAKE FASTER, BIGGER SALES because the finishing is finer, better! Because of its rubber-cushioned action Brightboy BURRS, FINISHES, CLEANS, POLISHES, *in one time-saving operation!* And today its wide versatility and adaptability are multiplied because:

THE COMPLETE BRIGHTBOY LINE IS NOW COMPOUNDED WITH EITHER ALUMINUM OXIDE OR SILICON CARBIDE GRAIN

AND—Brightboy is now available in a wide variety of grain sizes ranging from extra coarse to extra fine, in soft, firm and tough rubber binders.

Applications are far beyond the range of other methods. ASK YOUR DEALER FOR BRIGHTBOY LITERATURE. Advise us if he cannot supply you. Write us on any problem where finishing is involved.

Wheels, Sticks, Rods and Blocks for machine and manual operations.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 No. 13th Street, Newark 7, N. J.

America's Pioneer Manufacturer of Rubber-Bonded abrasives

▲ For more details circle NED-1130 F4 on enclosed inquiry slip ▲

SOLVE UP TO 9 FLOOR PROBLEMS

★ *Economically!*
★ *Easily!*
★ *Speedily!*

SCRUBBING
WAXING
POLISHING
SHAMPOOING
DRY CLEANING
GRINDING
SANDING
BUFFING
TROWELING

MULTI-CLEAN 9-Job Floor Scrubbing Machine

ENTHUSIASTIC USERS throughout the nation's institutions and businesses praise the Multi-Clean 9-Job Floor Scrubbing Machine. Because it's *money saving* . . . handles so many jobs for the cost of one machine. Because it's *labor saving* . . . ease of handling makes it a favorite with floor maintenance men everywhere. Because it's *time saving* . . . top efficiency cuts working time by hours. Available in five heavy-duty sizes to solve your particular floor problems.

Solution flow and motor controls at your fingertips. Easy-fill tank won't spill when tilted. Write for more information on the many outstanding long-life features found only under the Multi-Clean label.

MULTI-CLEAN®

2277 Ford Parkway — Dept. NE-6 St. Paul 1, Minn.

▲ For more details circle **NED-1131 F4** on enclosed inquiry slip ▲

Kill the ROOTS and you kill the WEEDS!

DOLGE WEED-KILLERS, sprayed in economical solution, *work down to the roots*—the ONLY way of destroying noxious plant life.

NEW DOLGE N P WEED-KILLER

—Can be used with confidence by anyone. Kills *all* vegetation by contact and translocation to weed roots; sterilizes the soil. RESULTS APPARENT IN A FEW DAYS. Spray, sprinkle or *use as dry powder*—"built-in" wetting and spreading agent works *fast* by wetting waxy surfaces of plants and inducing penetration into leaves, stems, roots. Non-inflammable, non-volatile, non-corrosive.

DOLGE SS WEED-KILLER

—Where NO vegetation is desired . . . on walks, drives, areas close to buildings. Tends to sterilize the soil so that wind-blown seeds cannot germinate.

DOLGE E.W.T. 40- 2, 4-D *SELECTIVE* WEED-KILLER

—*Will not harm good lawn grasses*, but kills dandelions, plantain and other broad-leaved noxious plants in turf.

Write for Dolge booklet on chemical weed control, and see your DOLGE SERVICE MAN for practical weed control advice.

Ask about **SOLEXTO**
Kills grubs of turf insects —one application protects lawns for years!

Dependable **DOLGE**
WESTPORT, CONNECTICUT

▲ For more details circle **NED-1132 F4** on enclosed inquiry slip ▲

BALL ROD ENDS

AVALON

ball and socket connecting rod ends are precision built, designed for a multitude of industrial uses . . . automatic controls and feeds, wherever push and pull linkage is required.

Perfect alignment is assured by the ball and socket bolt holes. You eliminate sloppy rod play. You get greater efficiency in performance and freedom from repairs.

Bolt Holes from 3/16" thru ½"
Lengths from 1⅛" thru 2½"

Also Furnished with Compression Springs and Right and Left Threaded Rods in Complete Sets . . . Write for Prices and Folder

AVALON MACHINE PRODUCTS, INC.
2535 EAST IMPERIAL HIGHWAY • LOS ANGELES 59, CALIF.

▲ For more details circle **NED-1133 F4** on enclosed inquiry slip ▲

New Processes & Materials

REPRODUCTION PROCESS
makes masters of line and halftones for run-off on offset duplicators

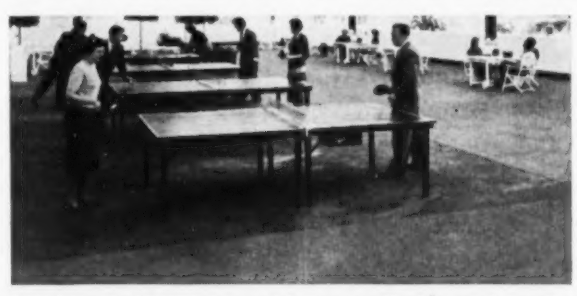
Reproduction process equipment prepares paper masters of subjects containing halftones and line copy for run-off of multiple copies on offset duplicators. Equipment is built around xerographic dry electrostatic process, where a black resinous powder cascaded over a specially treated XeroX plate performs the master making operation without water, liquid chemicals or sensitized materials. Camera, processor and fuser are the three units making up the equipment.

Camera is available in two models, one permitting full size copying up to 8½ x 13-in. of material with text or images on both sides, the other for reductions up to 50 per cent and enlargements up to 150 per cent of original size copy onto an 8½ x 13-in. plate. Processor is then used to clean plate and to transfer the image to any kind of paper or offset paper master. This master is placed into the fuser which fixes it so that copies can be run. The XeroX plates can be used many hundreds of times before they require reprocessing. Made by **Haloid Co.,** 413 Haloid St., Rochester 3, N. Y.

▲ For more details circle **NED-1134 F4** on enclosed inquiry slip ▲

FLOORING MATERIAL
is waterproof, resilient, flexible

Formulated from specially processed liquid latex, Dex-O-Tex Neotex flooring compound can be troweled on and is waterproof, resilient underfoot and flexible.



It is also resistant to acids and alkalis and greases. Nonslip qualities increase its usefulness in industrial manufacturing applications. Coating can be applied from ⅛ to ¾-in. thick and has flat colored surface resembling concrete in appearance. It is designed for application over steel, concrete or wood surfaces. Flooring, which also stands up under heavy traffic, is available in wide range of colors. Made by **Crossfield Products Corp.,** Valley Rd., Roselle Park, N. J.

▲ For more details circle **NED-1135 F4** on enclosed inquiry slip ▲

Keep cranes in service Cut maintenance costs

this booklet tells how

● This informative booklet on U·S·S Special Crane Rails and Fastenings can help you reduce crane and runway maintenance costs. It describes our three Special Crane Rail Sections—which were designed to give longer service under heavy wheel loads—and shows a special technique of tight-joint-assembly which, when combined with a new conception of "floating-rail" fastening, will result in fewer delays in crane operation and less maintenance expense.

To get your copy, just send your name and address to United States Steel Corporation, Room 4325 525 William Penn Place, Pittsburgh 30, Pa.

U·S·S SPECIAL CRANE RAIL SECTIONS

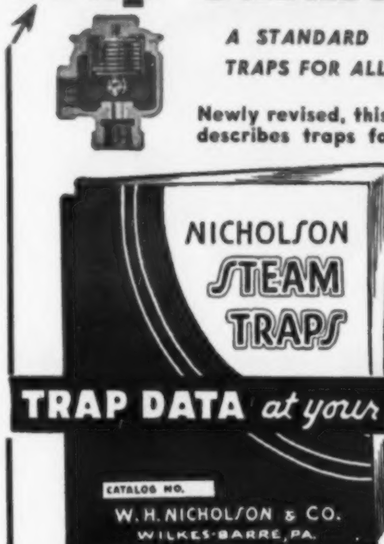
UNITED STATES STEEL

▲ For more details circle **NED-1136 F4** on enclosed inquiry slip ▲

Send for Nicholson

Trap Catalog 953

A STANDARD REFERENCE ON TRAPS FOR ALL APPLICATIONS

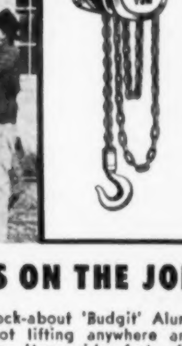


Newly revised, this 32-page reference describes traps for all mediums and pressures: thermostatic and metal expansion for pressures to 250 lbs.; weight and piston-operated for heavy duty. Complete with installation diagrams and formulae for determining proper size trap.

TRAP DATA *at your fingertips*

W. H. NICHOLSON & CO.
TRAPS·VALVES·FLOATS
162 Oregon St., Wilkes-Barre, Pa.

▲ For more details circle **NED-1137 F4** on enclosed inquiry slip ▲



GOES TO THE JOB...SAVES ON THE JOB

Light, easy to carry, hang up and use, the knock-about 'Budgit' Aluminum Chain Block puts real economy into spot lifting anywhere and everywhere. The ¼-ton size weighs only 29 lbs. It provides fast, efficient spur-geared hoisting in emergencies or full-time work. A hand chain pull of only 25 lbs. lifts the full load!

No ordinary hacksaw can cut the superhard load chain on the tough 'Budgit' Aluminum Chain Block. The hooks won't fracture when overloaded. The big, fast-acting load brake is fully automatic — makes lowering smooth, safe. Man, load, and hoist are fully protected. Splined fastenings are used throughout to distribute the loading evenly on the shafts. No keys, keyways or pressed fits to cause trouble. You save all around.

Available in ¼, ½, 1 and 2-ton capacities. Ask your "Shaw-Box" Distributor for full details or write for Bulletin 398.

MAXWELL MANNING & MOORE INC. TRADE MARK

'Budgit'® **CHAIN BLOCKS**

Builders of "Shaw-Box" and 'Load Lifter' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, 'American and 'American-Microsen' Industrial Instruments, and Aircraft Products.

▲ For more details circle **NED-1138 F4** on enclosed inquiry slip ▲

Specify ESSEX *EXTRA* TEST TEFLON MAGNET WIRE

WIRE SX PRODUCTS

for Your Highest Temperature Applications

★ **CAN WITHSTAND** 250° C for short periods of time; or 200° C continuously.

★ **SUPERIOR RESISTANCE** to acids, solvents, chemicals and moisture.

★ **GOOD SPACE FACTOR,** flexibility and abrasion resistance.

Teflon is the DuPont trademark for Polytetrafluoroethylene enamel.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *ATLANTA, GEORGIA; BOSTON, MASS.; *CHICAGO, ILL.; CLEVELAND, OHIO; DALLAS, TEXAS; DAYTON, OHIO; *DETROIT, MICH.; HARTFORD, CONN.; INDIANAPOLIS, IND.; *KANSAS CITY, MO.; *LOS ANGELES, CALIFORNIA; MILWAUKEE, WISC.; MINNEAPOLIS, MINN.; *NEWARK, N. J.; *PORTLAND, OREGON; UPPER DARBY, PHILADELPHIA, PENNSYLVANIA; ROCHESTER, NEW YORK; *ST. LOUIS, MISSOURI; *SAN DIEGO, CALIFORNIA; *SAN FRANCISCO, CALIFORNIA

▲ For more details circle **NED-1139 F4** on enclosed inquiry slip ▲

THE *Sutton* MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USE FOR
- EXHAUSTING
- DUST
- SMOKE
- FUMES
- VAPOR
- FORGE BLASTING

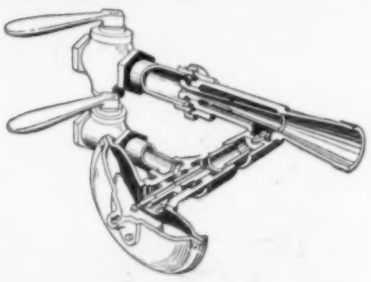
CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6". Write for literature and prices.

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

▲ For more details circle **NED-1140 F4** on enclosed inquiry slip ▲

cut process heating costs: specify 'SURFACE' burners



Bring your heating processes right up to date in efficiency and economy. Specify Surface Combustion burners and get these extras:

(1) save fuel with automatic proportioning;
(2) simplify control equipment with one-valve operation;
(3) increase operating temperature range with high turndown ratio;
(4) change adjustments quickly and easily;
(5) increase safety with 'Surface' design which mixes gas and air at or near the burner

Surface Combustion's biggest-in-the-industry line of burner equipment—80 types, 800 sizes—gives you the right equipment for every process heating job. You get field-proven design, controls, safeguards, and auxiliaries in the same package. The rated 'Surface' catalog makes it easy to select the burners you need.

Write for Literature H54-17.

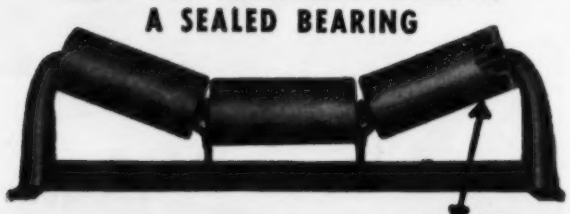
Surface

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO

▲ For more details circle **NED-1141 F4** on enclosed inquiry slip ▲

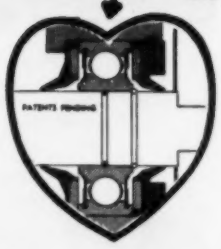
LIFETIME LUBRICATION for BELT CONVEYORS

HEART OF TRAN-SEAL IDLER IS A SEALED BEARING



NO RE-LUBRICATION

Its precision ground, *sealed* ball bearing is the heart of a Tran-Seal belt conveyor idler. Each bearing is factory lubricated, then factory sealed. There are *4 service-proven* synthetic rubber seals on each bearing. Re-lubrication is *never needed*. For details, write TRANSALL, INC., 120 N. 11th St., Birmingham, Alabama. Sales Representatives In Principal Cities.



Cross section of bearing showing 4 seals which keep lubrication in and dirt out.

(120-G)

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

▲ For more details circle **NED-1142 F4** on enclosed inquiry slip ▲

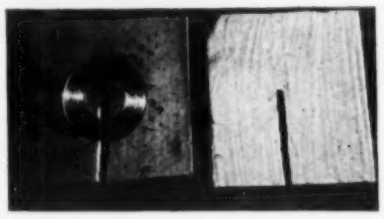
New Processes & Materials

STAINLESS STEEL SELECTOR shows correct type for application

Fabricators, designers, purchasing agents and others who do not have metallurgical training can use the "desk drawer metallurgist," slide rule type chart to select the exact type of stainless steel to use in most applications. Front of the Rezistal selector contains a comparison of physical, mechanical and elevated temperature properties, while reverse side reveals many of the important characteristics of this type of steel. Available from **Crucible Steel Co. of America,** Dept. ND, Box 88, Pittsburgh 30, Pa.

▲ For more details circle **NED-1143 F4** on enclosed inquiry slip ▲

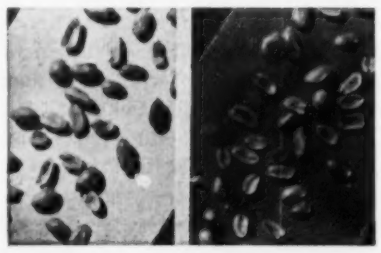
TUNGSTEN HARD-SURFACING applies to any surface by brush



Hard tungsten surfacing compound can be applied to metal, plastic or other surfaces at room temperatures by standard paint brush. Designated Tungstide, it consists of near-colloidal particle-sized metallic tungsten suspended in a hard liquid plastic together with a molybdenum disulfide compound which adds antiseize and antiscoring properties. Illustration shows two pieces of brass against which steel rod was rotated at 1725 rpm under 75 pounds pressure. Tungstide coated square on the right is unmarked while unprotected square is worn down to a depth of 1/16-in. Applications include coating plastic duplicating machine masters, sheet metal forming molds and other molds, jigs, tools and wear parts. Compound can be polished after curing. Made by **Lockrey Co.,** Lubricants Div. Liqui-Moly Bldg., Southampton, N. Y.

▲ For more details circle **NED-1144 F4** on enclosed inquiry slip ▲

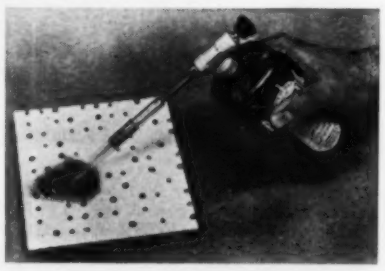
CONVEYOR BELTING in colors restful to workers eyes



Vinyl coated Plastex conveyor belting for sorting, assembly and inspection operations is now available in maroon or focal green colors in addition to standard white. These colors reduce eye-fatigue and are recommended for use where small objects are being processed. Illustration shows reduced glare presented by green belt (right) as opposed to white belt (left). Belting is available in all widths and plies and is washable, waterproof and acid and oil resistant. Made by **Buffalo Weaving & Belting Co.,** 230 Chandler St., Buffalo 7, N. Y.

▲ For more details circle **NED-1145 F4** on enclosed inquiry slip ▲

FIRE-RESISTANT PAINT for interior applications



Paint which provides fire and flame protection when applied to interior walls, ceilings and trim surfaces forms an insulating blanket to shield combustible surfaces from flash fires. Called Warco Duo-Tex, it may be brushed or sprayed on, is washable and dries to a flat finish. Resistance to mildew and fungus growth is a feature. Fire retardant quality is maintained with age. Paint is available in white and 12 basic pastel shades and is UL approved. Made by **Warren Refining & Chemical Co.,** Room 702, Finance Bldg., Cleveland 15, O.

▲ For more details circle **NED-1146 F4** on enclosed inquiry slip ▲

SAFE, EFFICIENT INDUSTRIAL CLEANING COSTS LESS - - - WITH NEW BENNETT UNIVERSAL AIR-OPERATED CLEANER!

The Bennett cleaner is safe because it is completely non-electrical. There is no danger from sparking, because there are no moving parts.

The Bennett cleaner saves time and money! It's light and highly portable. Cleans walls, shelves, beams, storage bins and other out-of-the-way surfaces with a minimum of labor!

Powerful suction developed by compressed air (approximately 90 lbs. pressure) adequate for all industrial applications. Highly efficient WET or DRY pickup.

Adaptable to any industrial application! Picks up metal chips, glass particles, etc. Interchanging bag with hose permits removal of liquids from any normal surface or tank.

Special fittings and brushes make the new Bennett cleaner adaptable to any industrial application. Interchanging bag with hose makes it adaptable for removal of liquids from any normal surface or tank.

NO MOVING PARTS! Unlimited life . . . no danger from sparking
COMPACT — POWERFUL! Highly efficient WET or DRY pick-up
LIGHT — PORTABLE! Body of aluminum casting
EASY TO OPERATE! Designed to reduce operator fatigue. Hand-operated metering valve

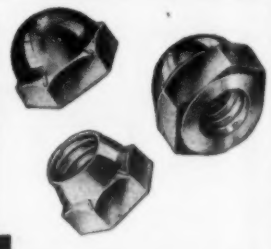
COMPLETE UNIT WITH 5" ALUMINUM NOZZLE AND BAG $29.95 EACH

NO ELECTRICAL CONNECTIONS NECESSARY!

M-M-A, Inc., Lancaster, Pa.

▲ For more details circle **NED-1147 F4** on enclosed inquiry slip ▲

NO tool marks! NO cut-off burrs!



YES they're GRC die cast CAP NUTS

. . . AND THEY NEED NO PROTECTIVE FINISHES IN MOST APPLICATIONS! Like all GRC die cast fastenings, they are non-ferrous, rustproof, and corrosion-resistant. GRC zinc alloy fastenings are furnished with clean threads and a bright finish that withstands normal usage—are available in all commercial finishes when desired.

• ECONOMICAL

Write today for samples, low prices and bulletins

OTHER GRC ZINC ALLOY FASTENINGS
GRC WING SCREWS
GRC WING NUTS
Exclusive Finger-Grip Design!
GRC SMALL TUBULAR RIVETS
Diameters up to 9/64"
lengths up to 5/16"
THUMB NUTS—SCREWS
large diameter
round head

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y.—NEw Rochelle 3-8600

▲ For more details circle **NED-1148 F4** on enclosed inquiry slip ▲

If You Use . . . or Can Use MOULDED OR FABRICATED RUBBER *In Any Shape or Form*

BUMPERS—BUSHINGS
CORKS—GROMMETS
SHEET—SLAB—SPRING
VACUUM CUPS—GASKETS
CYLINDER—WASHERS
SHEET—TUBING
EXTRUSIONS
LARGEST STOCK OF SPONGE IN U.S.A.

BUY NOW! LOWEST PRICES IN YEARS PREVAILING

3 decades of experience plus unexcelled laboratory and engineering service is at your command.

ATLANTIC's new comprehensive catalog is now available. Write for your copy today. No obligation.

ATLANTIC INDIA RUBBER WORKS, INC.
571 West Polk Street • Chicago 7, Illinois • HArrison 7-8290

▲ For more details circle **NED-1149 F4** on enclosed inquiry slip ▲

MONARCH
Mono-Cushions®

- **MORE TON-MILES PER DOLLAR** Performance-proven special rubber stocks wear evenly . . . last longer.
- **GREATER CUSHIONING ACTION** . . . for vehicles, loads, floors and drivers.
- **KING OF THE SOLIDS** . . . through continuous research, proven design, special production techniques.

MONARCH has developed industrial tire stocks with outstanding wear resistance and service life . . . has created tire and tread designs that cushion shocks and shock loads, assure maximum stability on short turns and high lifts, have superior non-skid qualities, steer easily. Specify MONARCH . . . *for every lift truck application.*

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO
2059-MR
7-255 Gen'l Motors Bldg. • Detroit 2, Mich.
SPECIALISTS IN INDUSTRIAL SOLID TIRES

Write today for catalog.

▲ For more details circle **NED-1150 F4** on enclosed inquiry slip ▲

IT COSTS LESS TO USE THE BEST!

PLS

For your convenience: available in handy 1-lb. brush top cans.

1. Takes less PLS to give a perfect seal.
2. One compound for many services: water...oil...gas...steam...chemicals...petroleum products—low and high pressures.
3. Never washes out—one application lasts forever.
4. Never hardens: joints may be easily broken after years of service—no damaged connections.

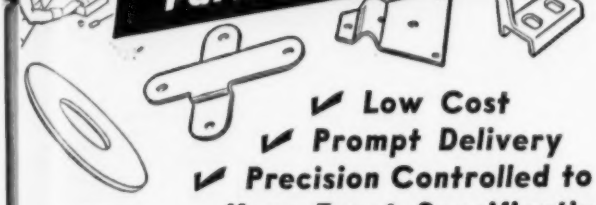
Prove it to yourself. Send for a free sample. Crane Packing Company, 1811 Cuyler Avenue, Chicago 13, Ill.

JOHN CRANE CRANE PACKING COMPANY

IN CANADA: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.

▲ For more details circle **NED-1151 F4** on enclosed inquiry slip ▲

Quadriga®
WASHERS and STAMPINGS
Parts Assembly Work



- ✔ Low Cost
- ✔ Prompt Delivery
- ✔ Precision Controlled to Your Exact Specifications

Washers and stampings of all types and materials, including tension, spring, formed, cupped, finishing and wire terminal washers . . . custom-fabricated to your requirements.

Complete die-making facilities . . . press capacity to 150 tons, depth of draw to 4 inches.

High production, quality controlled parts assembly work at economical cost.

Request full information. Send B/P, Sample or Data for estimate. Ask for free catalog.

THE QUADRIGA MANUFACTURING CO.
221 West Grand Avenue Chicago 10, Illinois

▲ For more details circle **NED-1152 F4** on enclosed inquiry slip ▲

New Processes & Materials

PLASTER CASTING PROCESS for production of thin, smooth and accurate aluminum castings

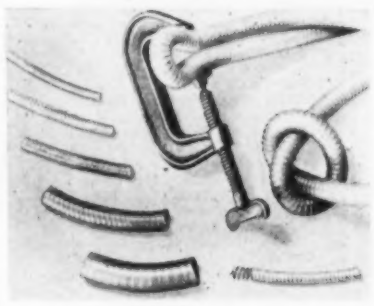
Development of Alcoa permeable plaster process is making it possible to open new fields of application for aluminum and magnesium castings. With process, parts can be cast with thin cross sections, good surface smoothness and accurate dimensional tolerances.

Both small and large parts can be made with the process, which is also used with sand or permanent mold materials to produce a composite mold casting. This technique permits designer to specify surface and dimensional accuracy only where it is needed.

General tolerances possible are ±0.010-in. across the parting line for 1 in. or less. Between points produced in one part of the mold a tolerance of ±0.005-in. is possible. Nominal surface finish of 125 rms or better can be achieved. Developed by **Aluminum Co. of America,** 720 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-1153 F4** on enclosed inquiry slip ▲

TRANSLUCENT PLASTIC PIPING features molded-in helical wire for flexibility, resistance to crushing



Extreme flexibility and resistance to crushing is provided by Armourvin translucent plastic industrial piping which has 120-ton tensile helical steel wire molded into piping wall. Piping will bend around 5/16-in. diameter spindle without reduction of its internal bore. It resists water, oil, grease, most acids and alkalies, diesel fuel, coal and butane gases and remains flexible at temperatures from −40 to 70° C.

Armourvin can be made in one continuous piece, without laminations, in lengths up to 2 miles. It is offered in ⅛ to ½-in. ID and ⅜ to 1-in. OD. Armorflow piping which is especially resistant to highly volatile fluids will handle boiling water without adverse effect. It remains flexible at −40 on up to 150° C. Made by **Newage International, Inc.,** 235 E. 42nd St., New York 17, N. Y.

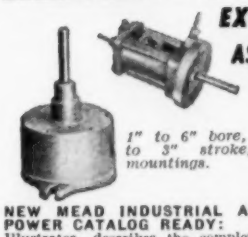
▲ For more details circle **NED-1154 F4** on enclosed inquiry slip ▲

YOU NEED THE LOW-COST MEAD
Air-Clamp*

*Air Cylinder

—SO DURABLE
—SO SIMPLE
—SO EFFECTIVE
—SO EASY TO USE

EXCLUSIVE MEAD DESIGN ASSURES TROUBLE-FREE OPERATION



1" to 6" bore, ⅛" to 3" stroke, 4 mountings.

Mead invented, patented and introduced the original Air-Clamp* to the air cylinder field—with its simple design, compact power and long, dependable performance. Thousands of progressive factories use Air-Clamp*. Save countless hours of production time in clamping, locking, releasing, feeding, and in simplified design of work-holding fixtures. Every engineer, production man and purchasing agent is invited to send for the new Mead Catalog.

NEW MEAD INDUSTRIAL AIR POWER CATALOG READY: Illustrates, describes the complete line of MEAD-DESIGNED AIR Operated Devices such as Air Cylinders, Valves, Presses, Vises, Chucks, Hammers, Drill Press Feeds, Work Feeders, Timers, semi-automatic combinations, etc. Write for copy.

PROMPT DELIVERY from local or factory stocks of Mead single-acting and double-acting Air Cylinders.

MEAD SPECIALTIES COMPANY

Write for New Catalog!

4114 No. Knox Ave., Dept. NA-64, CHICAGO 41, ILLINOIS

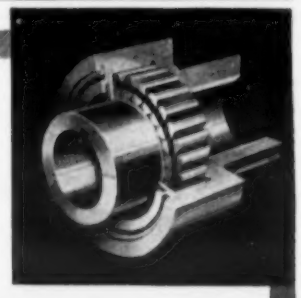
▲ For more details circle **NED-1155 F4** on enclosed inquiry slip ▲

Roll a NEW Floor OVER the old with

Abolish downtime due to floor failures. Just roll ***Redi-Roll*** over the old floor to a compacted ¼" thickness and USE AT ONCE. It's spark-proof! It's tough! It's industry's best floor buy. Write for details now . . . today!

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 5

▲ For more details circle **NED-1156 F4** on enclosed inquiry slip ▲



for

OVER-RUNNING, BACKSTOPPING, INDEXING:

WHY SPECIFY A CLUTCH WITH LESS THAN MAXIMUM TORQUE CAPACITY?

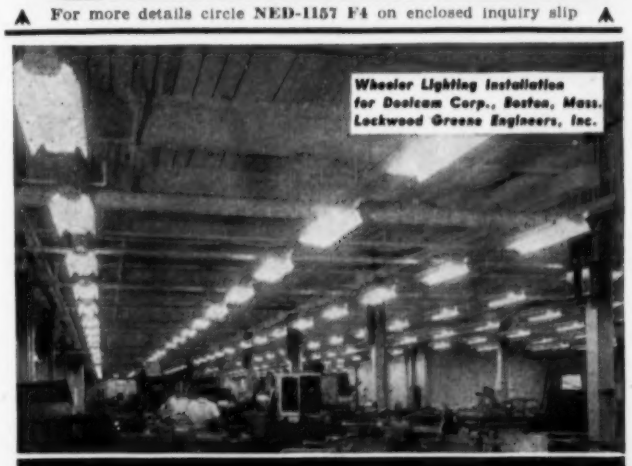
You're assured a full complement of torque capacity when you specify today's modern clutch design. The Formsprag Clutch, with a full complement of sprags, provides more capacity in less unit space than any other clutch. You're assured long life too: an infinite number of changing contact points prevents excessive wear. Design simplicity permits rebuilding—three times. For more facts, write for this 10-page folder of descriptive engineering data, on your letterhead please.

DISTRIBUTORS IN PRINCIPAL CITIES

FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT
FORMSPRAG *Clutches*

▲ For more details circle **NED-1157 F4** on enclosed inquiry slip ▲



Wheeler **LIGHTING FIXTURES**

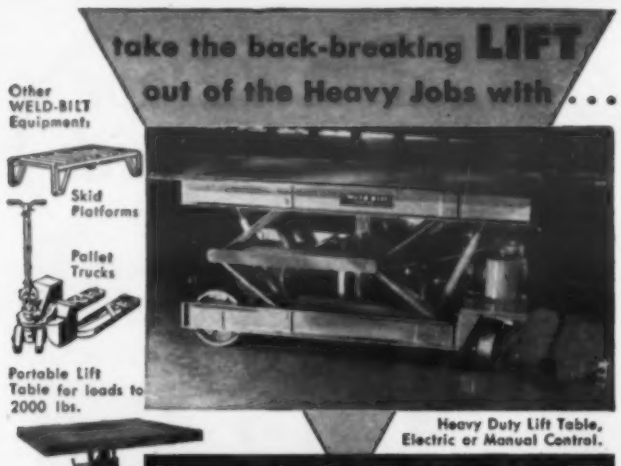
A BASIC PRODUCTION TOOL OF AMERICA'S LEADING INDUSTRIES

In industry after industry . . . where modern progressive thinking rules . . . Wheeler Lighting Fixtures are the logical choice for maximum lighting efficiency!

WHEELER REFLECTOR COMPANY
275 CONGRESS STREET, BOSTON 10, MASS.
DISTRIBUTED EXCLUSIVELY THROUGH ELECTRICAL WHOLESALERS

▲ For more details circle **NED-1158 F4** on enclosed inquiry slip ▲

take the back-breaking LIFT out of the Heavy Jobs with . . .



Weld-Bilt
HYDRAULIC LIFT TABLES

Now heavy dies, sheet steel, big machined parts are *easy* to handle — with WELD-BILT Hydraulic Lift Tables. Simple to adjust to loading height, move to press or machine position, and raise or lower to comfortable working position — without heavy lifting.

Heavy Duty Lift Tables, for loads up to 10 tons, have foot pedal and push button control, or foot pump. Portable Lift Table handles loads to 2000 lbs. Write for bulletin and prices.

WEST BEND EQUIPMENT CORP.
Materials Handling Engineers
311 Water Street • West Bend, Wisconsin

▲ For more details circle NED-1159 F4 on enclosed inquiry slip ▲

PRECISION STEEL
TRADE-MARK DIES

Improve the quality of your trade-marking. Use dies similar to the one illustrated for marking Matthews own manufactured products.

Every Matthews trade-mark die is machined from selected tool steel, precision-engraved to customer requirements, and heat-treated for extra long wear.

Send a design sketch of your proposed trade-mark and sample part with each inquiry. Complete recommendations without obligation.

JAS. H. MATTHEWS & CO.
3943 FORBES ST. PITTSBURGH 13, PA.
BOSTON • CHICAGO • PHILADELPHIA • CLIFTON, N. J.

▲ For more details circle NED-1160 F4 on enclosed inquiry slip ▲

VULCAN
ELECTRIC SOLDERING TOOLS
SCREW TIP

Standard Sizes
7/16"—½"—⅞"
1⅛"—1⅜"
1⅝"—1¾"

U.L. Approved

Men to whom soldering is an every-day job have found Vulcan Screw Tip Soldering Tools fast and efficient.

Light weight, with cool, adjustable birch handles, shaped to fit the hand, they have the "hang" or balance that makes expert soldering easy.

Tips are of finest forged copper. Complete with 6 ft. heater cord and unbreakable rubber plug.

VULCAN ELECTRIC CO.
Danvers 7, Mass.

Vulcan Electric Soldering Tools, Solder Pots, Glue Pots, Branding Irons. Vulcan Electric Heating Elements.

▲ For more details circle NED-1161 F4 on enclosed inquiry slip ▲

Index to Advertisers

A

A'G'A Div. of Elastic Stop Nut Corp. of America 37
Abart Gear & Machine Co. 11
Abrasive Products, Inc. 51
Acme Electric Corp. 106
Acme Industries, Inc. 66
Acme Steel Prod. Div. Acme Steel Co. 72
Acromark Co. 12
Acushnet Process Co. 31
Adams, R. P., Co. 5
Aerojet-General Corp. 113
Aeroquip Corp. 111
Aerovent Fan Co. 68
Aget-Detroit Co. 17
Air Reduction Co. 102
Aircraft-Marine Products, Inc. 24
Airetool Mfg. Co. 32
Akro-Mils, Inc. 4
Alan Wood Steel Co. 41
Albion Industries, Inc. 92
Alemite Div., Stewart Warner Corp. 12
All-Steel Equipment Inc. 64
Allen-Bradley Co. 42
Allied Products Corp. 5
Allis Chalmers Mfg. Co. .. 27, 91
Alter, Harry, Co. 76
Aluminum Co. of America 28, 75
Aluminum Ladder Co. 60
Alvey Conveyor Mfg. Co. .. 18
Alvey-Ferguson Co. 120
American Air Filter Co. 25, 104
American Baler Co. 5
American Chain & Cable Co. 16, 19
American Decalcomania Co. 81
American Metal Products Co. 68
American Monorail Co. 50
American Pulley Co. 28, 99
American Recording Chart Co. 38
American Society for Metals . 120
American Solder & Flux Co. 7
American Wheelabrator & Equip. Corp. 28, 59, 98
Ames, B. C., Co. 11
Anaconda Wire & Cable Co. 45
Anderson, V. D., Co. 66
Arcos Corp. 16
Armstrong-Bray & Co. 110
Armstrong Bros. Tool Co. .. 65
Aro Equipment Corp. 31
Atlantic India Rubber Works, Inc. 116
Atlas Press Co., Clausing Div. 62
Aurand Mfg. & Equip. Co. .. 11
Aurora Equipment Co. 40
Automatic Transportation Co. 97
Automotive Rubber Co. 96
Avalon Machine Products, Inc. 16, 115
Avery Adhesive Label Corp.. 39

B

Babcock & Wilcox Co., The Tubular Products Div. 35
Bal, William, Corp. 77
Baldwin-Lima-Hamilton Corp. 7, 114
Barber-Colman Co. 79
Barksdale Valves 72
Barnes & Smith Corp. 74
Bassick Co. 55
Bausch & Lomb Optical Co... 2
Bear Mfg. Co. 62
Beck, Charles, Machine Corp. 109
Bellows Co. 65
Beltraction Co. 93
Benchmaster Mfg. Co. 59
Bendix Aviation Corp. 30, 63, 83
Berger Manufacturing Div., Republic Steel Corp. .. 33, 92
Biddle, James G., Co. 41
Bin-Dicator Co. 35
Black & Decker Mfg. Co.... 120
Black & Webster, Inc. 52
Black Diamond Saw & Machine Works, Inc. 106
Blakeslee Mfg. Co. 48
Blaw-Knox Div. of Blaw-Knox Co. 11
Bokum Tool Co. 101
Borg, George W., Corp. 56
Borroughs Mfg. Co. 6
Bostitch, Inc. 63
Boston Gear Works 29, 67
Bowser, Inc. 68
Bradley Washfountain Co. .. 92
Brady, W. H., Co. 49
Brady Corporation 98
Brainard Steel Div., Sharon Steel Corp. 29
Brammer Corp. 34
Breeze Corporations 41
Brown, W. R., Corp. 75
Brown Engineering Co. 97
Brown & Sharpe Mfg. Co. . 24
Browning Mfg. Co. 2
Buckeye Tools Corp. 21
Buffalo Forge Co. 26, 103
Buffalo Weaving & Belting Co. 60
Burgess-Manning Co. 27, 82
Buschman, E. W., Co. 8
Bussmann Mfg. Co. 62
Bustin Firm-Grip Grating Corp. 95
By-Products Steel Co., Div. of Lukens Steel Co. 74

C

Calculagraph Co. 81
Cam Tool Co. 32
Cambridge Wire Cloth Co. 26, 71
Camcar Screw & Mfg. Corp. 70
Camloc Fastener Corp. 61
Capco 72
Carboloy, Dept. of General Electric Co. 109
Carborundum Co. 61
Carpenter Steel Co. 62
Carter Controls, Inc. 114
Central Safety Equipment Co. 99
Chain Belt Co. 44
Challenge Machinery Co. 20
Champion Lamp Works 44
Chart-Pak, Inc. 76
Chase Bag Co. 44
Chelsea Fan & Blower Co. 89
Chicago Eye Shield Co. 88
Chicago Hardware Foundry Co. 23
Chicago Rawhide Mfg. Co. .. 83
Chicago Thrift-Etching Corp. 26
Chicago Tramrail Corp. 69
Chicago Wheel & Mfg. Co. 73
Chisholm-Moore Hoist Div... 9
Cincinnati Electrical Tool Co. 10
Clark Ind. Truck Div. of Clark Equip. Co. 51
Clauss Cutlery Co. 78
Clearing Machine Corp. 84
Cleveland Crane & Engineering Co. 32, 83
Cleveland Vibrator Co. 28
Cleveland Worm & Gear Co. 30
Climax Molybdenum Co. 6
Clipper Mfg. Co. 91
Coated Coils Corp. 106
Cochrane Corp. 102
Colonial Rubber Co. 19
Colorado Fuel & Iron Corp. 29, 63, 75
Colson Corp. 72
Columbia Electric Mfg. Co. 19
Commander Mfg. Co. 46
Cone Drive Gears, Div. Michigan Tool Co. 36
Conneaut Rubber & Plastics Co. 99
Consolidated Vacuum Corp... 60
Continental-Diamond Fibre Co. 21
Continental Gin Co. 24
Control Cells Corp. 58
Conveyor Specialty Co. 110
Convoy, Inc. 40
Coppus Engineering Corp. .. 110
Cover, H. S. 8
Crane Co. 29
Crane Packing Co. 117
Cross Co. 13
Cullen-Friestedt Co. 67
Cuno Engineering Corp. 74
Curran Corp. 113
Currier Co. 8
Curtis Pneumatic Machinery Div., Curtis Mfg. Co. 17

D

Dart Union Co. 52
Davis Instruments, Div. of Davis Emergency Equip. Co. 86
Defiance Machine & Tool Co. 113
DeLaval Steam Turbine Co... 84
Deming Company 105
Denison Engineering Co... 19, 95
Derby Sealers, Inc. 25
Detroit Electric Furnace Div. Kuhlman Elec. Co. 84
Detroit Hoist & Machine Co... 97
Detroit Power Screwdriver Co. 79
Detroit Stamping Co. 85
DeVilbiss Co. 78
DeWalt, Inc. 88
Dillon, W. C., & Co. 33
Dixon Automatic Tool, Inc. 43
Dixon Valve & Coupling Co. . 92
Dodge Mfg. Corp. 92
Doepke, Chas. Wm., Mfg. Co. 87
Dolge, C. B., Co. 115
Dollinger Corp. 22
Downs Crane & Hoist Co. .. 14
Draftsman's Do-All Templates 3
Driv-Lok Pin Co. 79
Dudco Div., N. Y. Air Brake Co. 95
Duff-Norton Mfg. Co. 3
duPont de Nemours, E. I., & Co. 69
Durable Rubber Products Co. 82
Durant Mfg. Co. 50

E

Eagen, James, & Sons 55
Eastman Kodak Co. .. 25, 63, 89
Eaton Mfg. Co., Reliance Div. 90
Eclipse Machine Div., Bendix Aviation Corp. 30
Edmont Mfg. Co. 73
Edmund Scientific Corp. .. 9, 120
Elastic Stop Nut Corp. of America 37, 84
Electric Controller & Mfg. Co. 108
Electric Hotpack Co. 113
Electric Storage Battery Co. 81
Electro-Therm, Inc. 69
Elgin National Watch Co., Abrasives Div. 77
Elliott Co. 78
Elliott, B. K., Co. 11
Elwell-Parker Electric Co... 90
Emery, A. H., Co. 81
Enterprise Machine Parts Corp. 38
Equipment Mfg., Inc. 59
Equipto, Div. Aurora Equipment Co. 40
Erico Products, Inc. 80
Eriez Manufacturing Co. 109
Essex Wire Corp. 115
Ethylene Chemical Corp. 3
Exact Weight Scale Co. 96
Ex-Cell-O Corp. 38, 71
Exide Industrial Div., Electric Storage Battery Co. 81

F

Fafnir Bearing Co. 26
Farquhar, A. B., Div. Oliver Corp. 99
Farrelloy Co. 120
Farval Corp. 114
Faultless Caster Corp. 107
Federal Press Co. 105
Federal Products Corp. 67
Federal Tool & Mfg. Co. .. 45
Feedrail Corporation 54
Felt Products Mfg. Co. 14
Felters Co. 95
FencPainteR Corp. 73
Fenwal, Inc. 20
Ferguson, Harry J., Co. 87
Ferro Corp. 57
Fibre Specialty Div., National Vulcanized Fibre Co. 67
Fielden Instrument Div. Robertshaw-Fulton Controls Co. 30
Fisher Scientific Co. 23
Flash Box Opener Co. 34
Flexible Steel Lacing Co. .. 25
Flexrock Co. 44, 120
Foote Bros. Gear & Machine Corp. 108
Ford, M. A., Mfg. Co. 12
Formsprag Co. 117
Foster, L. B., Co. 105
Foster Mfg. Co. 57
Fostoria Pressed Steel Corp. 18, 79
Foxboro Co. 5
Franklin Balmar Corp. 98
Frantz, S. G., Co. 30
Frederick Iron & Steel, Inc. 5
French & Hecht Div. Kelsey-Hayes Wheel Co. 80
Friez Instrument Div. Bendix Aviation Corp. 63
Fuller Co. 103

G

Galland-Henning Mfg. Co. .. 82
Gardner Machine Co. 103
Gast Mfg. Co. 20
Gates Engineering Co. 52
Gear Grinding Machine Co. .. 47
General American Transportation Corp. 56
General Box Co. 53
General Electric Co. 93, 109
General Plate Div., Metals & Controls Corp. 38
General Radio Co. 37
General Scientific Equipment Co. 9
General Tire & Rubber Co. .. 27
Geroter May Corp. 80
Gillen, John, Co. 53
Globe Hoist Co. 29
Goggle Parts Co. 69
Goodall Rubber Co. 89
Goodrich, B. F., Co. 21
Goodyear Tire & Rubber Co. 23, 35
Gotham Instruments Div. Amer. Machine & Metals . 94
Govro-Nelson Co. 52
Graphic Systems 51
Graphite Metallizing Corp. .. 27
Grav-I-Flo Corp. 46
Graymills Corp. 90
Greenlee Tool Co. 91
Gries Reproducer Corp. 116
Groov-Pin Corp. 108
Guardian Electric 88

H

Hallemite Mfg. Co. 20
Hamilton Caster & Mfg. Co. 7
Hamilton Rubber Mfg. Corp. 9
Hamilton Tool Co. .. 13, 15, 17
Hammond Machinery Builders, Inc. 87
Handy & Harman 38
Hanna Engineering Works .. 49
Hannifin Corp. 105
Hansen, A. L., Mfg. Co. 35
Hansen Manufacturing Co. .. 101
Harris-Barrier, Inc. 14
Hays Corp. 33
Hetherington & Berner Inc. 46
Heyl & Patterson, Inc. 6
Hill Acme Co. 39
Hilliard Corp. 111
Hills-McCanna Co. 18
Hobbs Mfg. Co. 32
Hollow Boring Corp. 82
Homer Manufacturing Co. .. 10
Homestead Valve Mfg. Co. .. 107
Honan-Crane Corp. 60, 61
Hoover Ball & Bearing Co. . 100
Hunt, C. B., & Sons, Inc. .. 15
Hunter Fan & Ventilating Co. 31
Hydraulic Accessories Co. .. 10
Hydreco Div., N. Y. Air Brake Co. 34
Hydroway Scales, Inc. 41

I

Ideal Industries, Inc. 3
Illinois Engineering Co. 104
Illinois Testing Laboratories, Inc. 47, 70
Industrial Bench & Equipment Mfg. Co. 77
Industrial Filtration Co. 104
Industrial Marking Equipment Co. 56
Industrial Products Co. 27
Industrial Tape Corp. 108
International Staple & Machine Co. 25
Ironbound Box & Lumber Co. 26
Irvington Varnish & Insulator, Div. Minn. Mining & Mfg. Co. 24, 87

J

Jabsco Pump Co. 74
James, D. O., Gear Mfg. Co. 61
Jelliff, C. O., Mfg. Corp. .. 85
Johns-Manville 45
Johnson, Carlyle, Machine Co. 19
Johnston Equipment & Supply Co. 91
Jones, C. Walker, Co. 53
Jones, Howard B., Div., Cinch Mfg. Corp. 95

K

Kelite Products, Inc. 2
Keller Tool Co. 102
Kellogg Div., American Brake Shoe Co. 54
Kester Solder Co. 28, 81
Kett Tool Co. 79
Key Co. 100
King Mfg. Corp. 4
Kinney Mfg. Div., N. Y. Air Brake Co. 55
Korfund Co. 96
Krieg, Victor J., Inc. 64
Kuhlman Electric Co. 84

L

Labelon Tape Co. 113
Laduby Company 4, 15
Lamson Corp. 13
Lapeer Mfg. Co. 104
Lempco Products, Inc. 13
Lepel High Frequency Laboratories, Inc. 71
Levin, Louis, & Son, Inc. .. 101
Lewis Welding & Eng. Corp. 16
Linde Air Products Co., A Div. of Union Carbide & Carbon Corp. 27, 75
Link-Belt Co. 47
Lion Fasteners, Inc. 92
Lobdell United Co. 114
Logan Co. 4
Lovejoy Flexible Coupling Co. 97
Lukens Steel Co. 74
Lunkenheimer Co. 88
Lustra Corp. 80

Mc

McGill Mfg. Co. 28, 65

M

M B Manufacturing Co. ... 16
M & E Mfg. Co. 8
M-M-A Inc. 116
Maas & Waldstein Co. 101
Magline, Inc. 71
Magna-Lock, Inc. 106
Magnesium Co. of America 30
Maguire, Walter, Co. 48
Manheim Mfg. & Belting Co. 119
Manning, Maxwell & Moore, Inc. 115
Marshalltown Mfg. Co. 7
Masonite Corp. 14
Mason-Neilan Regulator Co. 51
Mathews Conveyer Co. 89
Mathewson Machine Works . 22
Matthews, Jas. H., & Co. .. 118
May-Fran Engineering, Inc. . 100
Mead Specialties Co. 24, 117
Mechanical Handling Systems, Inc. 65
Mercoid Corp. 101
Merrill Brothers 39
Metal & Thermit Corp. 43
Metals & Controls Corp. ..38, 42
Metzgar Conveyor Co. 90
Meyercord Co. 65
Meyers, W. F., Co. 21
Micrometrical Mfg. Co. ... 87
Mill-Rose Co. 68
Minnesota Mining & Mfg. Co. 24, 29, 87
Mitts & Merrill 100
Mixing Equipment Co. 50
Modern Machine Tool Co. .. 20
Monarch Rubber Co. 117
Montgomery Tools 46
Morton & Co. 5
Morton Machine Works 41
Moto-Truc Co. 17
Mueller Brass Co. 64
Mulconroy Co. 8
Multi-Clean Products, Inc. .. 115
Multistamp Co. 15

N

Nagle Pumps, Inc. 16
National Air Sander, Inc. .. 58
National Cylinder Gas Co. .. 49
National Dryer Sales Corp. .. 98
National Machine Products Co. 46
National Metal Abrasive Co. 33
National Screw & Mfg. Co. 23
National Tool Co. 68
National Vulcanized Fibre Co. 34, 67
Naylor Pipe Co. 79
Nebel Machine Tool Co. ... 2
New England Oven & Furnace Co. 9
New Hermes Engraving Machine Corp. 15
New Jersey Machine Corp. .. 39
New York Air Brake Co. 34, 55, 95
N. Y. Belting & Packing Co. 18
New York Blower Co. 98
Newage International, Inc. .. 94
Newark Wire Cloth Co. ... 33
Newman Industries, Inc. .. 88
Nicholson File Co. 71
Nicholson, W. H., & Co. .. 115
Nielson, E. V., Inc. 2
Nissen, John P., Jr., Co. .. 81
Nolan Co. 102
Norgren, C. A., Co. 36
Northern Engineering Works 58
Norton Co. 112
Nu-Jett Products 111
Nu-Matic Grinders, Inc. ... 35

O

OPW Corp. 18
Oberdorfer Foundries, Inc. Ind. Pump Div. 107
Ohio Brass Co. 53
Ohio Gear Co. 70
Oliver Corp., A. B. Farquhar Div. 99
O'Neil-Irwin Mfg. Co. 57
Orr & Sembower, Inc. 72
Oster Manufacturing Co. .. 32
Overbeke-Kain Co. 74
Owatonna Tool Co. 40
Ozalid Div. of General Aniline & Film Corp. 25

P

Pabco Products Inc. 85
Pacific Industrial Mfg. Co. . 63
Page Steel & Wire Div. 19
Palley Supply Co. 31
Palmer, Harold L., Co. .. 112
Palmer Thermometers, Inc. . 113
Palnut Company 21
Paltier Corp. 119
Pangborn Corp. 55
Parker Sweeper Co. 32
Parr Mfg. Corp. 34
Pass & Seymour, Inc. 12
Patterson Foundry & Machine Co. 47
Paul Machine Tool & Die Works 53
Peerless Electric Co. ..... 1[illegible]
Peerless Pump Div., Food Machinery & Chemical Corp. 102
Penn Metal Corp. of Penna. 1[illegible]
Pereny Equipment Co. 67
Perfecting Service Co. 7
Permacel Tape Corp. 108
Pfaudler Co. 40
Phillips Mfg. Co. 102
Photoswitch Inc. 111
Pike, E. W., & Co. 107
Pine, William S. 108
Pines Engineering Co. 42
Pioneer Rubber Co. 23
Piper & Paine 99
Pitt Industries 3
Pittsburgh Coke & Chemical Co. 48
Pittsburgh Plate Glass Co... 47
Pix Manufacturing Co. 5
Plax Corp. 110
Polymer Corp. of Penna. .. 96
Portage Double-Quick Tool Co. 88
Porter-Cable Machine Co. .. 93
Potdevin Machine Co. 103
Powers Regulator Co. 34
Precise Products Corp. 56
Precision Thermometer & Instrument Co. 105
Premier Mfg. Co. 6
Presstite Engineering Co. ... 66
Procunier Safety Chuck Co. . 97
Progressive Mfg. Co. 76
Propellair Div., Robbins & Myers, Inc. 78
Punch-Lok Co. 67

Q

Quadriga Manufacturing Co. 117
Quincy Compressor Co. 104

R

Randall Graphite Bearings, Inc. 22
Raymond Corp. 94
Ready Tool Co. 30
Reed Manufacturing Co. .. 54
Reeves Pulley Co. 107
Reliance Div., Eaton Mfg. Co. 90
Reliance Electric & Engrng. Co. 85
Renfroe, J. C., & Sons, Inc. 107
Republic Steel Corp. ..33, 76, 92
Revolvator Co. 86
Reznor Mfg. Co. 24
Richard Brothers Punch Div., Allied Products Corp. 5
Richards, J. A., Co. 55
Ridge Tool Co. 49
Rivett Lathe & Grinder Inc. 43
Robbins & Myers, Inc. 78
Roberts, Weldon, Rubber Co. 114
Rockford Clutch Div. Borg-Warner 42
Rock-Tred Corp. 117
Rockwell Manufacturing Co. 41
Rockwood Sprinkler Co. ...22, 77
Roebling's, John A., Sons Corp. 90
Rolock, Inc. 56
Root, B. M., Co. 97
Rotary Lift Co. 73
Roto-Finish Co. 108
Rubber Chemicals Div., E. I. duPont de Nemours & Co. 69
Ruberoid Co. 100
Ruby Chemical Co. 54
Ruger Cranes 114
Rynel Corp. 103

S

SKF Industries, Inc. 60, 61
Sabin Machine Co. 106
Sarco Co. 43
Scherr, George, Co. 4
Schrader's A., Son 39, 77
Scintilla Div. of Bendix Aviation Corp. 83
Screen Equipment Co. 17
Sealol Corp. 93
Sehlube Co. 7
Sellstrom Mfg. Co. 98
Service Machine Co. 44
Set Screw & Mfg. Co. 57
Sexauer, J. A., Mfg. Co. .. 45
Shakeproof, Inc. 109
Sheehan, R. T., Co. 94
Sheldon Machine Co. 73
Shepard Niles Crane & Hoist Corp. 42
Sherwin-Williams Co. 66
Sier-Bath Gear & Pump Co. 103
Simplex Time Recorder Co. .. 69
Skinner Electric Valve Div., Skinner Chuck Co. 108
Smith, G. W., & Sons, Inc. 96
Snap-Tite, Inc. 59
Sommer Metalcraft Corp. .. 23
Sonoco Products Co. 104
South Bend Lathe Works .. 22
Spaulding Fibre Co. 15
Speed Selector, Inc. 99
Spencer Thermostat Div., Metals & Controls Corp. .. 12
Spencer Turbine Co. 13
Spo Incorporated 113
Spray Engineering Co. 112
Spraying Systems Co. 109
Square D Company 33, 86
Stackbin Corp. 22
Stackpole Carbon Co. 12
Standard Conveyor Co. 112
Standard Pressed Steel Co. 31, 54, 82
Star-Kimble Motor Div., Miehle Printing Press & Mfg. Co. 114
Sta-Warm Electric Co. 14
Stearns Magnetic, Inc. 120
Stephens-Adamson Mfg. Co. 8, 9
Stewart Warner Corp., Alemite Div. 12
Stone Machinery Co. 94
Stonhard Co. 19
Stow Mfg. Co. 58
Strand, N. A. Div., Franklin Balmar Corp. 98

Strong Electric Corp. 9
Struthers-Dunn, Inc. 41
Struthers Wells Corp. 90
Sturtevant Mill Co. 40
Superior Electric Co. 64
Superior Tube Co. 49
Surety Rubber Co. 59
Surface Combustion Corp. ... 116
Sutton Mfg. Corp. 116
Swartwout Co. 12
Swift & Co. 4
Swivelier Co. 84
Synthane Corp. 50

T

Tech Products, Inc. 3
Templ Corp. 93
Thermo Electric Mfg. Co. .. 83
Thomas & Betts Co. 89
Thomas Truck & Caster Co. 45
Thompson Electric Co. 105
Tickle, Arthur, Engineering Works 11
Tile-Tex Div., Flintkote Co. 58
Tinnerman Products, Inc. .. 83
Toledo Pipe Threading Machine Co. 42
Toledo Scale Co. 78
Tolerton Co. 84
Tomkins-Johnson Co. 107
Torrington Co. 38
Tourek, J. J., Mfg. Co. 70
Towmotor Corp. 77
Transall, Inc. 116
Transeal, Ltd. 36
Tranter Mfg. Inc., Platecoil Div. 84
Tri-Saw Corp. 86
Tropical Paint & Oil Co. .. 110
Truscon Steel Div., Republic Steel Corp. 76
Twin Disc Clutch Co. 31

U

Union Carbide & Carbon Corp., Linde Air Products Co. 27, 75
Union Metal Mfg. Co. 36, 60, 61
United Electric Controls Co. 37
United Laboratories, Inc. .. 8
U. S.-Burke Machine Tool Div. 101
U. S. Electrical Mfg. Corp. . 51
U. S. Electrical Motors, Inc. 21
United States Gasket Co. .. 52
U. S. Hoffman Machinery Corp. 20
United States Rubber Co. .. 43
United States Steel Corp. .. 115
U. S. Stoneware Co. 18
Universal Drafting Machine Corp. 43
Universal Engineering Co. .. 48
Universal Mfg. Corp. 86

V

Valvair Corp. 2
Vanton Pump & Equipment Corp. 10
Varflex Corp. 76
Veeder-Root, Inc. 82
Vulcan Electric Co. 118
Vulcan Tool Co. 80

W

Wales-Strippit Corp. 10
Waltz Furnace Co. 39
Waterloo Valve Spring Compressor Co. 95
Waterman Engineering Co. . 109
Watlow Electric Mfg. Co. . 96
Watson-Stillman Fittings Div. H. K. Porter Co. 14
Wayne Pump Co. 36
Weatherhead Co. 6
Webb, Jervis B., Co. 7
Webster Instrument Inc. .. 13
Wellman Bronze & Aluminum Co. 10
Wells Mfg. Corp. 44
West Bend Equipment Corp. 118
West Point Mfg. Co. 34
Western Tool & Mfg. Co. .. 35
Westinghouse Air Brake Co. 91
Westinghouse Electric Corp. 26, 63, 111
Weston Electrical Instrument Corp. 48
Wheel Trueing Tool Co. 40
Wheeler Insulated Wire Co. . 50
Wheeler Reflector Co. 117
White, S. S., Dental Mfg. Co. 37
Whitehead Stamping Co. .. 104
Wickwire Spencer Steel Div. 29, 63, 75
Wiedeke, Gustav, Co. 110
Wiegand, Edwin L., Co. ..4, 75
Willson Products, Inc. 70
Wing, L. J., Mfg. Co. 105
Winnen Incinerator Co. 37
Wiremold Company 53
Witt Cornice Co. 112
Worthington Corp. 12
Wright Hoist Div., American Chain & Cable 16
Wrought Washer Mfg. Co. . 78

Y

Yale & Towne Mfg. Co. ... 19
Yarnall-Waring Co. 80

Z

Zallea Brothers 103

Index to Products

A

Abrasive Products 48, 51, 61, 73, 77, 97, 101, 103, 112, 114
Adhesives 4, 35
Air Conditioning 68, 73, 91
Air Pads 35, 80
Alloys, Special Purpose ..104, 112

B

Balancing Machines 62
Balls 100
Barriers, Parking 14
Batteries 84
Bearings 8, 22, 26, 49, 60, 61, 67, 70, 100
Bellows 41, 100
Belt Fasteners 5, 110
Belting 18, 25, 34, 89, 102, 107, 119
Belt Treatment 93
Belts, Conveyor 60, 75, 109, 114, 116
Benders 42, 53, 55
Bins & Boxes 1, 4, 8, 15, 22, 33, 36, 40, 60, 61, 67, 74, 77, 82, 87, 95
Boxes & Crates, Wooden 53
Brakes 69, 71, 114
Brazing Materials 38, 109
Brushes 3, 47, 68
Brushes, Electric 27
Buildings, Industrial 76
Burners 102, 116
Bushings 92
Bushings, Drill 38, 48, 100

C

Cam Follower 65, 90
Cans & Pails 112
Car Door Opener 102
Car Spotter 9, 47
Carbon Products ..12, 27, 103
Cases & Chests 95
Casters 7, 27, 55, 92, 107
Castings 10, 117
Cements, Repair 20, 95
Ceramics 95
Chains, Roller 104, 110
Charts 38
Chucks 3, 98
Clamping Devices 41, 51, 57, 67, 85, 104, 114, 117
Clamps, Lifting 14, 39, 43, 67, 107
Cleaners, Air ..5, 45, 82, 92, 102
Cleaners, Tube 22, 32
Cleaners, Vacuum 13, 116
Cleaning Equipment, Blast 18, 28, 49
Cleaning Machines ..8, 102, 107
Cleaning Materials 2, 33, 90, 107, 110, 113
Cloth, Diaphragm 24
Clutches 3, 17, 19, 42, 83, 96, 114, 117
Coatings, Protective 7, 48, 52, 116
Collars 78
Communications Equipment.. .....47, 50, 71, 94
Compressible Liquids 103
Compressors, Air 12, 17, 36, 54, 65, 103, 104
Condensation Preventive ... 107
Connecting Rods 115
Controls, Air & Hydraulic 1, 13, 15, 20, 25, 33, 39, 45, 52, 54, 62, 82, 91, 94, 98, 102, 108, 109
Controls, Bin Level 35
Controls, Density 105
Controls, Electric ..... [illegible], 24, 27, 28, 34, 37, 40, 42, 43, 56, 62, 70, 72, 75, 83, 84, 86, 88, 92, 94, 96, 98, 102, 106, 108
Controls, Level 43, 88, 111
Controls, Production 50, 51
Controls, Remote 20
Controls, Temperature & Pressure.....20, 29, 43, 51, 54, 56, 66, 72, 77, 78, 94, 101, 108
Conveyor Accessories 7, 24, 55, 85, 91, 116
Conveyors 1, 4, 8, 18, 49, 52, 57, 59, 60, 61, 65, 84, 87, 89, 90, 94 99, 100, 108, 110, 111, 112, 120
Coolants 89
Cooling Towers 66
Counting Devices 50, 82
Couplers 6
Couplings, Flexible 2, 46, 80, 97, 103
Crane Accessories ..13, 19, 115
Cranes 32, 39, 42, 69, 114
Cutters, Metal 45, 55
Cutters, Tape & Sheet ..8, 109
Cutoff Machines 94
Cylinders, Air & Hydraulic.. .....17, 24, 31, 4[illegible] 65, 72, 81, 93, 96, 105, 114
Cylinders, Motorized 63

D

Deburring Equipment 10, 11, 38, 43, 46, 85
Die Accessories 99
Dies 44, 107
Dies, Adjustable 10
Dispensers, Tape 25, 48
Dockboards & Ramps 30, 66, 71, 112
Dock Covers 72
Door Operators 79
Doors, Industrial 74
Drafting Equipment 3, 11, 43, 60, 76
Dressers, Wheel 40
Drill Heads, Adjustable 97
Drilling Machines 24, 42, 52, 89, 102
Drills ..24, 45, 53, 60, 70, 109
Drives, Chart 38
Drives, Machine 21, 31, 75, 104, 108, 110
Drives, Variable Speed 14, 18, 99, 100
Drying Equipment 10, 98
Duplicating, Dieless 57
Dust Collectors 10, 17, 25, 40, 80, 98, 110

E

Electronic Equipment 66, 100, 104, 120
Elevating Equipment 5, 15, 29, 45, 53, 64, 73, 74, 118
Engines 7, 113
Engraving Machines 15

F

Fans & Blowers 1, 8, 13, 31, 68, 76, 78, 79, 89, 98, 110, 116
Fastening Devices 1, 13, 17, 21, 23, 31, 32, 34, 46, 49, 51, 54, 55, 57, 61, 68, 70, 76, 78, 79, 83, 84, 87, 90, 92, 94, 104, 108, 109, 110, 116
Feeders 10, 24, 79, 80, 120
Feeders, Motorized Hopper .. 79
Fencing 19
Files 71
Filtering Equipment 5, 7, 11, 20, 22, 27, 30, 41, 74, 81, 82, 92, 104
Finishes 66, 75, 101, 103, 105, 116
Finishing Equipment 43, 46, 71, 73, 108
Finishing Equipment, Blast 59, 85
Finishing Equipment, Spray, ...2, 13, 78
Fire Extinguishing Equipment 6, 8, 22, 63
Flexible Shaft Machines ..58, 98
Floor Machines.... 32, 109, 115
Flooring Materials 8, 11, 41, 48, 58, 85, 94, 95, 97, 99, 103, 115, 117, 119, 120
Forgings 64
Forming Machine, Metal 37, 57, 101
Furnaces, Industrial 44, 57, 84, 113
Fuses 62, 93

G

Gages, Level 11, 64
Gages, Precision 3, 4, 11, 24, 50, 59, 67, 88
Gages, Pressure & Temperature 60, 64
Gearing 12, 61, 103, 108
Generators, Steam ..15, 52, 72
Glass Products 94
Glare Preventives 36
Glass Working Machine 92
Gloves, Industrial 5, 23, 53, 59, 73
Gloves, Neoprene 73
Goggles 19, 70, 88, 106
Grating Materials 11, 95
Grinders, Tool & Cutter 13, 22, 106
Grinding Accessories 1, 35
Grinding Machines 13, 38, 47, 67, 78, 87, 111

H

Hammers 52, 83, 114
Handbook 104, 120
Hardboard 14, 100
Hardware 63, 72
Heat Exchangers 5, 40, 94, 96, 100, 102
Heat Treating Equipment ... 39
Heaters, Compound 14, 75, 112
Heaters, Electric 1, 4, 69, 75, 83, 96, 112
Heaters, Induction 71, 91
Heaters, Unit ..24, 26, 59, 105
Heaters, Water 34
Heating Equipment 108
Hogging Machines 100
Hoists 4, 9, 16, 30, 42, 46, 58, 108, 115
Hose & Fittings 9, 36, 41, 57, 59, 67, 81, 89, 92, 101, 111, 114

I

Incinerator 37
Indicators, Pressure & Temperature 30, 93, 113
Inspection Equipment ..2, 9, 12, 14, 20, 21, 31, 51, 58, 68, 76, 87, 100, 102, 106, 107, 120
Instruments, Electric ..25, 48, 94
Insulation, Electric ..34, 76, 87

J

Jacks 3, 14
Jacks, Leveling 38
Jigs & Fixtures 22, 108
Joints, Rotating 37

K

Keyseater 77
Knobs 56

L

Labels 3, 39, 49, 65, 73, 111
Laboratory Equipment 18
Ladders 60, 61
Laminated Materials 38, 50
Lighting Equipment 4, 15, 18, 44, 51, 80, 81, 90, 96, 98, 105, 112, 117
Lights, Pilot 64, 94
Lockers & Shelving 6, 40, 92, 106
Locks 13
Lubricants 6, 105
Lubricating Equipment 12, 18, 45, 91, 102, 114

M

Machine Tools 2, 10, 13, 17, 22, 29, 32, 44, 62, 73, 74, 80, 101, 110, 112
Machine Tool Accessories 9, 18, 20, 24, 30, 35, 36, 48, 62, 68, 74, 106
Magnetic Equipment 6, 12, 86, 91, 120
Management 51, 76, 98
Marking Equipment 1, 12, 15, 47, 49, 51, 56, 62, 79, 81, 113, 118
Materials Handling Equipment 5, 14, 15, 26, 28, 37, 39, 43, 46, 48, 59, 60, 61, 65, 67, 77, 83, 85, 100, 106, 119
Materials Handling, Overhead 15, 50, 82
Metal Bonding 11
Meters, Flow 5, 33, 44, 55, 64, 68, 69
Meters, Tong Test 19, 48
Meters, Viscosity 54
Mirrors 101
Mixing Equipment 47, 50, 55, 73, 80
Motors, Electric 21, 26, 29, 63, 65, 85, 87, 88, 106, 108, 111, 112, 114
Mufflers, Catalytic 53

N

Nailing Machines 5
Name Plates 26, 28, 45, 65, 81, 111
Nozzles 18
Nozzles, Spray 109, 112

O

Office Equipment 36, 40, 76, 84, 92, 120
Oil Reclaimer 111
Opener, Box 34
Ovens, Industrial 9

P

Packaging Equipment & Materials 25, 44, 52, 58, 69, 76, 84, 97, 110, 114
Packings & Gaskets 45, 52, 106
Paper, Industrial 104, 110
Parts, Precision 16, 38, 53, 57, 70
Pipe & Fittings 8, 40, 46, 50, 52, 79, 103, 117
Pipe & Thread Compound ... .14, 100, 117
Pipe Tools & Machines 42
Plastics ..3, 7, 34, 50, 56, 95, 96, 97, 99, 104, 109, 110, 112
Plating Equipment 33
Plugs & Caps 37
Power Units, Hydraulic 9, 34, 58
Press Accessories 110
Press Brake 16
Presses 31, 32, 52, 59, 64, 66, 84, 100, 105
Presses, Molding 16
Process Equipment 18, 85, 90, 112
Production Facilities 82, 100, 104
Projectors, Motion Picture .. 63
Pullers 40
Pulleys & Sheaves ..28, 100, 107
Pumps 4, 14, 16, 20, 21, 30, 31, 46, 55, 56, 57, 60, 64, 74, 79, 86, 93, 95, 98, 102, 105, 106, 107, 108
Pumps, Chemical 10, 33, 64, 110
Pumps, Coolant 90
Pumps, Vacuum 20, 39, 103
Punches 5, 10, 91
Pyrometers 47

R

Racks 59, 68, 97, 119
Rectifiers 114
Reels, Hose 35
Reels, Stock 42, 67
Refrigeration Equipment 68, 84
Relays 7, 32, 33, 37, 41, 90, 106
Reproduction Equipment 25, 34, 89, 115
Resistors 41
Respirators 8, 69, 106
Rollers 20
Rubber Products 19, 22, 31, 82, 96, 111, 116
Rubber, Synthetic 69
Rust Preventive ..7, 99, 105, 110

S

Safety Equipment ..4, 8, 9, 11, 27, 41, 67, 86, 88, 94, 95, 98
Saw Blades 79
Saws, Masonry 91
Saws, Wood & Metal 21, 38, 40, 44, 73, 79, 86, 88, 93
Scaffolding 67, 86, 88
Scales ..41, 48, 58, 78, 81, 96, 114
Screening Equipment 17, 94, 102
Scissors & Snips 78
Seals & Sealants 4, 6, 21, 22, 29, 31, 66, 93, 99, 106, 114
Shapes, Steel 74
Shears 5, 7, 23, 37, 50, 71, 109
Shims 95, 104
Shop Equipment 4, 61, 68, 77, 82, 84, 95
Slide Rules 23
Slings 71, 90
Snubbers 27
Soldering Equipment & Materials 7, 28, 35, 54, 75, 81, 118, 120
Speed Reducers 11, 21, 30, 36, 70
Spray Equipment 109, 112
Spreaders, Compound 103
Sprockets 9, 29, 44, 85
Stampings 5, 45, 58, 78, 117
Stapling Equipment 25, 31, 35, 63, 76, 104
Steel 110
Steel, Stainless 112, 116
Strainers 66
Strapping, Steel 29, 72
Strip, Prefinished Metal 106

T

Tables 23
Tacker, Hand 35, 104
Tachometers 46, 61, 69
Tape, Industrial 66, 97, 108, 109, 113
Tapping Equipment 24, 46, 89, 96, 97
Telephone Booths, Acoustic.. 82
Television, Industrial 50, 58
Testing Equipment 3, 6, 13, 17, 22, 30, 33, 36, 41, 48, 54, 60, 61, 66, 70, 75, 76, 94, 96, 98, 100, 102, 110, 114
Thermometers 113
Timing Devices 41, 46, 56, 57, 62, 69, 80, 106
Tires, Industrial 21, 23, 27, 80, 117
Tools, Cleaning 11
Tools, Cutting 12, 28, 54, 59, 65, 89, 93, 101
Tools, Hand 25, 35
Tools, Pneumatic 2, 21, 24, 31, 45, 47, 58
Tools, Portable Electric 1, 40, 56, 74, 93, 120
Tools, Stud Driving 55
Track & Accessories 105
Tractors, Hoist 97
Tractors, Industrial 23
Transformers 9, 32, 55, 64, 77, 106
Traps, Steam 104, 115
Trolley Busways 54
Trucks, Hand 26, 45, 53, 56, 72, 94, 106
Trucks, Industrial Power 17, 19, 51, 71, 72, 77, 86, 88, 90, 97, 99
Tube Fabricating Equipment. 16, 42, 53, 106, 110
Tubing & Fittings ..6, 28, 35, 49
Turbine-Generators 64, 77

V

Valves 18, 19, 21, 46, 55, 77, 80, 88, 95, 104
Ventilating Equipment ..12, 103
Vibration Absorbers 16, 38, 95, 96, 98
Vibrating Equipment 28, 113
Vises 49, 75, 114

W

Washers 31, 45, 78, 104, 117
Washroom Equipment 19, 34, 83, 92, 98
Water Treatment 13, 98, 113
Waterproofing Material ..44, 110
Weed Killers 115
Welders, Electric 49
Welding Accessories 16, 27, 43, 75, 80, 96, 102, 113
Welding & Cutting, Gas 26, 68
Wheels, Industrial 80, 99
Winders, Tension 32, 96
Wipers, Rod 10
Wire Cloth & Screens 26, 29, 33, 85
Wire, Electric 43, 115
Wire Rope & Accessories 87
Wire Specialties 23, 62
Wiring Accessories 21, 24, 29, 45, 47, 53, 54, 63, 64, 65, 80, 83, 86, 89, 95

FLOORING PROBLEMS ARE EASILY SOLVED with STONHARD RESURFACER

NO SPECIAL SKILL
NO SPECIAL TOOLS NEEDED
Only ½ Inch Required

FEATHER-EDGES PERFECTLY

A patch or complete overlay over concrete, wood, brick or asphalt withstands the heaviest industrial traffic for years to come. No more ruts and holes, the surface is smooth, tough, resilient and chip-proof. Write today for our free RESURFACER Booklet.

STONHARD COMPANY
Building Maintenance Materials since 1922
101 Stonhard Building, 1306 Spring Garden St., Philadelphia 23, Pa.

Please send me your free RESURFACER Booklet 101/6/54
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-1162 F4 on enclosed inquiry slip ▲

LET US SHOW YOU HOW TO CUT WAREHOUSING COSTS... as much as 75%

Paltier STORAGE SYSTEM

PALTIER records are filled with proof after proof of storage cost cuts in the handling of every conceivable type of product. We can cut your storage costs, too!

ASK US:
• PALTIER studies your storage problem—engineers and designs a system for your specific needs.
• Many PALTIER installations pay for themselves "right from the start."
• This booklet tells the PALTIER story, ask for it today.

THE PALTIER CORPORATION 1705 KENTUCKY ST. MICHIGAN CITY, IND.

▲ For more details circle NED-1163 F4 on enclosed inquiry slip ▲

Can Veelos V-Belts CUT VIBRATION 20% to 90% in your machines?

Machine vibration is usually caused by one or more of these five factors: bearings; motor; clutch; sheaves; v-belts. Frequently, v-belts alone are the major cause of vibration.

Actual performance on many different types of machine tools has proved that Veelos v-belts can reduce vibration 20% to 90%.

Here's why this is so...

Every Veelos belt is *perfectly balanced* throughout its entire length. Every Veelos link and stud is *absolutely uniform*. The *smooth, machine cut sides* and the *laminated construction* of the belt assure full, vibrationless power delivery.

These facts can be readily demonstrated with an electronic analyser. This analyser measures amplitude of vibration to as low as 2-millionths of an inch. A few minutes is all that is required to show you that Veelos runs smoother and creates less vibration than regular v-belts.

Drop us a line for a demonstration with the electronic analyser.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive
Veelos is known as Veelink outside the United States

▲ For more details circle NED-1164 F4 on enclosed inquiry slip ▲

Stearns Road Magnet sweeps up tramp iron magnetically

IN THE YARD — IN THE PLANT — ON THE PARKING LOT

Install a Stearns road magnet on your truck, tractor or lift truck — clean up nuts, bolts, scrap iron, all around the plant — without wasting a minute of costly hand labor. Powerful Stearns magnet snaps up scrap iron from shop floors — whisks tire-puncturing nails off the parking lot — removes unsightly tramp iron from the yard.

When operator shuts off generator, scrap automatically drops in neat pile. Magnet helps pay for itself with salable scrap. Four models — 18 in. x 36 in.; 18 in. x 48 in.; 18 in. x 60 in.; 18 in. x 96 in. Custom models on request. Write for bulletin No. 38-A. 1085

MAGNETIC EQUIPMENT FOR ALL INDUSTRY

STEARNS MAGNETS

STEARNS MAGNETIC, INC. 653 S. 28th St., Milwaukee 46, Wisconsin

▲ For more details circle **NED-1165 F4** on enclosed inquiry slip ▲

TINS ALL METALS

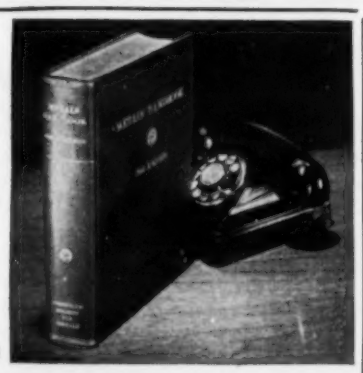
Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

▲ For more details circle **NED-1166 F4** on enclosed inquiry slip ▲

The Metals Handbook



1332 Large pages
1752 Illustrations
1057 Tables
803 Articles
1,620,000 Words
40,000 Copies in use

Here is a book without a competitor . . . a book 25 years in the making. The current, 7th edition of the Metals Handbook was compiled and written by 68 committees of the American Society for Metals; more than 500 metals engineers were hand picked by the Society as the top experts, the men best qualified to write the most authoritative possible reference book on metals, metal properties, fabrication and uses. The book they wrote is the Metals Handbook. It is divided into 37 principal sections, and contains 803 separate articles and data sheets on metals, metal shaping, forming, heat treating, welding, machining, foundry work, cleaning, finishing, testing, inspection, control and research techniques. All metals, all processes are included. The 64-page index and 4-page section on how to use the book make it easy for any reader to find what he wants. Over 40,000 copies of this edition are now in use by engineers, metallurgists, designers, production men, executives, purchasing agents and others. Order your copy today by returning the coupon below. The price is $15.00.

American Society for Metals, Room 312
7309 Euclid Ave., Cleveland 3, Ohio

Rush me a copy of the Metals Handbook.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

☐ **$15.00 Enclosed** ☐ **Bill me.**

▲ For more details circle **NED-1167 F4** on enclosed inquiry slip ▲

VIBRATORY PARTS FEEDERS chrome plated, rubber coated bowls

Parts unusual in design or extremely delicate and fragile can be fed with perfect timing, accurate placement and planned position by Peeco vibratory parts feeders. Parts can range in size from microscopic up to 3 in. Feeders range in size from 5 to 30 in. with single and multiple tracks and find use in metalworking, processing, packaging or assembly. Bowls are now furnished with chrome plated or cured rubber coated interior surfaces, designed for clockwise or counterclockwise rotation, and tracks vary in width and angle of climb. Range of bowl sizes and material, together with four sizes of vibratory machines, hoppers and integral electronic counters, makes it possible to specify unit for a wide variety of applications. Made by **Perry Equipment & Engineering Co.**, Dept. NED, 3125 Brandes St., Erie, Pa.

▲ For more details circle **NED-1168 F4** on enclosed inquiry slip ▲

ELECTRONIC COMPUTER contained in desk-size cabinet

Developed for use in business as well as in engineering and scientific computation, the E101 electronic computer is contained in cabinet the size of a normal desk. Its price is expected to bring electronic computing techniques within the reach of wide range of users. Special operator training is not required. Electronic "brain" has internal "memory unit" which stores tables, logarithms and intermediate results of computations. This information is automatically transferred when needed to the computing mechanism or other components. Data are introduced to the machine through a keyboard. Machine will print final answers directly at speeds up to 24 characters per second, these being immediately available in usable form. Made by **Burroughs Corp.**, 6071 Second Ave., Detroit 32, Mich.

▲ For more details circle **NED-1169 F4** on enclosed inquiry slip ▲

Electrical & Electronic Components

Electran Mfg. Co.—Custom-made transformers, reactors, chokes, special windings and electronic devices are discussed in 6-page illustrated bulletin 55C. Ordering information required and other necessary data are covered.

▲ For more details circle **NED-1170 F4** on enclosed inquiry slip ▲

CHECK, MEASURE, INSPECT with this HANDY

POCKET COMPARATOR

6 Power Magnification

A GREAT TIME SAVER!

Only $22.50 POSTPAID

MEASURES . . .
ANGLES • RADII
CIRCLES
LINEAR DIMENSIONS
In both decimal inches and mms.

FAST and ACCURATE
On Small Parts . . . Small Dimensions

First time available at such low price! EDSCORP POCKET COMPARATOR. Fine, imported measuring magnifier—for fast, accurate inspections. Black anodized metal Cell. Clean Plastic base. Focusing adjustment. Used to check layouts, machining on tools, dies, gauges — to check threads, chamfers, small holes. In optical work for checking flaws. Instrument comes in protective leather case. We guarantee complete satisfaction or your money back . . .

Order Stock No. 30.061-AE . . . $22.50 postpaid.
Send check or M.O. or order on open account.

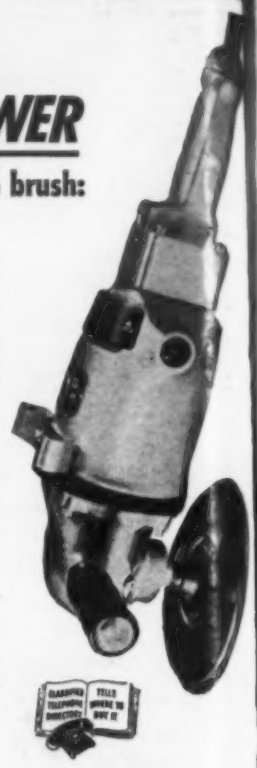
GET FREE CATALOG AE

If you haven't seen our big, FREE Catalog, you don't know what you're missing. Fantastic variety—never before have so many lenses, prisms, optical instruments, and components been offered from one source. Positively the greatest assembly of bargains in all America. Imported! War surplus! Telescopes! Microscopes! Hand Spectroscopes, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get optical items. Write for FREE CATALOG "AE".

EDMUND SCIENTIFIC CORP., Barrington, N. J.

▲ For more details circle **NED-1171 F4** on enclosed inquiry slip ▲

New Black & Decker SANDER-GRINDER has 90% more POWER to sand, to grind, to cut, to brush:



TOWSON, MD.—Black & Decker's new 7-inch Heavy-Duty Sander-Grinder has almost **twice** the power of previous models! Yet it's **lighter,** cuts down operator fatigue! Greater power and higher spindle speeds—choice of 5,200 or 6,000 rpm—combine to make it a nearly **universal** tool, for continuous, heavy-duty production sanding, grinding, wire-cup brushing, planer-head cutting. . .B&D-built universal motor, specially designed just for this tool, guarantees 'round-the-clock production! Motor housing protected from abnormal abuse; contoured to direct exhaust air **away** from operator! Switch-guarded against accidental operation; all ball bearings lubricant-sealed. Complete with pad, three sanding discs for only $79.50! For faster production schedules, greater output per tool, see the new B&D Sander-Grinder at your distributors. Write for FREE Form No. 27. Address: The Black & Decker Manufacturing Company, 609 Pennsylvania Avenue, Towson 4, Maryland.

For nearest Distributor, see "Tools-Electric."

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC **TOOLS**

▲ For more details circle **NED-1172 F4** on enclosed inquiry slip ▲

"The Boss has been down to the plant checking production costs since we put in that new Alvey-Ferguson completely co-ordinated conveyor system."

For Engineered Conveying Systems

THE ALVEY-FERGUSON COMPANY

Since 1901

32 Disney Street CINCINNATI 9, OHIO

Representatives in Principal Cities

▲ For more details circle **NED-1173 F4** on enclosed inquiry slip ▲

TRY IT! MAIL COUPON!

THIS TOUGH CONCRETE PATCH SETS INSTANTLY!

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut—tamp smooth—truck over! No waiting! INSTANT-USE bonds tight to old concrete . . . right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floor are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE HANDBOOK

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE—no obligation. (Clip and attach Coupon to Co. letterhead).

Name .....
Title .....
Company .....
Address .....

▲ For more details circle **NED-1174 F4** on enclosed inquiry slip ▲